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Japan Report

(FOUO 8/82)

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JAPAN REPORT

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POLITICAL AND SOCIOLOGICAL

SUZUKI'S REELECTION POSSIBILITIES DISCUSSED

Tokyo THE DAILY YOMIURI in English 8 Jan 82 p 3

[Editorial by Raisuke Honda: "Suzuki's Hard Year"]

[Text]

It seems likely that Prime Minister Suzuki will be reelected president if the Liberal-Democratic Party (LDP) next November but this does not mean the year will be without political turbulence or critical tests for him.

Suzuki displayed firmness in his New Year's press conference and in an interview over television. He'll need this because he must overcome some obstacles in the way of his reelection.

The first obstacle will be to achieve progress in overcoming deficit-ridden state finances and handling the normal session of the Diet.

The premier said early last year that he would stake his political life on administrative and financial reform, promising that deficit-covering government bonds would be discontinued by fiscal 1984 to establish sound state finances.

But his promises seem less valid now. There was a remarkable drop in tax revenue for fiscal 1981. The government has decided to issue government bonds worth ¥375 billion next fiscal year, but even this is expected to leave the government in the red by ¥600 billion.

Under these circumstances, the Finance Ministry is considering borrowing funds which were to be used for redeeming government bonds to tide the government over the revenue shortfall.

Because of these developments, pessimistic voices are being heard within the government and the LDP that there will be no choice but to defer financial rehabilitation.

At the same time, criticism is being leveled at the finance minister, who is strongly trusted by the premier. Also, there seems to be growing distrust of the prime minister himself.

In the current Diet session which will be resumed in late January, the opposition parties are expected to demand a large-scale income tax reduction as their way to condemn the government's economic policies.

How well will the premier survive this onslaught?

Another difficult political problem will be the expected series of verdicts in the Lockheed payoff trials this year.

The ruling on former All Nippon Airways (ANA) chairman Tokuji Wakasa is scheduled for January 26, and verdicts on former transport minister Tomisaburo Hashimoto and Takayuki Sato, former parliamentary transport vice-minister, will follow shortly thereafter.

The prosecution is expected to make its demand for the sentencing of former prime minister Kakuei Tanaka before the summer vacation, and the court's verdict is expected in the autumn.

Needless to say Tanaka's verdict will have an impact on Suzuki's political future.

Judging from the way the trial has gone, there is little chance that Tanaka will be acquitted.

And if, as expected, he is found guilty, this will jolt the ruling LDP. There is a possibility that former premier Miki may again raise the demand to cleanse the party of Tanaka's influence.

This could undermine and perhaps cause the collapse of the three pillars of the Suzuki administrations—the Suzuki, Tanaka

and Fukuda factions. And this could damage Suzuki's campaign for reelection as LDP president.

Suzuki cannot afford to take his reelection for granted. He should remember also that neither Tanaka nor Miki nor Fukuda succeeded in winning reelection as LDP president.

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POLITICAL AND SOCIOLOGICAL

GENERAL ELECTION RUMORS BECOME RIFE

Tokyo THE JAPAN ECONOMIC JOURNAL in English 12 Jan 82 p 10

[Article by Keiichiro Kuboniwa]

[Text]

There have been rumors circulating among ruling and Opposition parties recently that a dissolution of the House of Representatives and an ensuing general election, long considered to be scheduled in 1983, might be held this year. Although there are many who predicted the general election would be held simultaneously with the Upper House election slated in 1983 at the earliest, some observers have started saying, since late last year, that "the general election will be held in 1982 before the court ruling on Kakuei Tanaka" or simultaneously with nationwide local elections in April, 1983," thereby casting ripples over election-conscious Dietmen.

One rumor, circulating among the ruling Liberal Democratic Party and the Opposition New Liberal Club and the Komeito, had it: "Prime Minister Suzuki might dissolve the Lower House in an attempt to break the deadlock if administrative reform does not go smoothly." The other rumor had it: "If Tanaka is sure to be judged guilty in the first Lockheed payoff trial this fall, the general election is very likely to take place before that ruling." Even one member of the Komoto faction said at its plenary meeting late last year "I have heard a rumor that the general election is likely in 1982," causing an uproar among faction members present at the meeting.

Those rumors are amplified even further by the fact that the Tanaka faction, the most powerful among the LDP, is making speedly preparations for the general election. In November last year, the LDP's National Organization Committee, which was considered to be the bastion of the Tanaka faction, has mapped out secretly "a list of possible candidates for the next general election." One member of the Suzuki faction, who just happened to drop in and see the list, was completely astounded, saying "at the time when all LDP members are in a flamboyant mood over the reshuffling of the cabinet and the LDP leadership, the Tanaka faction is steadily making preparations for the general election."

The Tanaka faction took hold of the post of LDP secretary general in the last personnel reshuffle, and furthermore, managed to retain Accounting Bureau Chief Yoshiro Hayashi, their own man, in the same post vehemently rejecting the demand by the Suzuki faction that the post of accounting bureau chief must be in the hands of the faction which holds the LDP presidency. This retention of their own man is considered as another move to prepare for the coming general election among LDP members.

Foreign Minister Yoshio Sakurauchi, who took command of managing the simultaneous elections two years ago as LDP secretary general, and led the party into an overwhelming victory, said: "We did not win because of simultaneous elections. We won because Prime Minister Masayoshi Ohira suddenly died. It is dangerous to think that we can win another simultaneous election again next time. When we lose simultaneous elections, that will be a complete defeat. The risks involved are too high." In saying this, Sakurauchi voiced a strong opposition to the double elections and conveyed his opinion to the present LDP leadership.

But some of Japan's business circles have reportedly told the prime minister that "they cannot stand the idea of having three elections in 1983." That is, if the general election is held sometime in 1983 aside from nationwide local elections in April and the Upper House Election in June, the business circles could not afford to pump out the political funds needed for those elections. Probably, with this consideration in mind, Fukuda faction members declared last year that it is natural to think the elections will be double-barreled." Suzuki faction members also said "Prime Minister Suzuki, who will be able to win the reelection for the LDP presidency this fall, will not complicate the political scene by dissolving the Lower House," thereby denying the early dissolution of the Lower House.

Despite all those arguments, the only time possibly considered for the general election in any event is either at the same time as nationwide local elections or the Upper House election, or one year earlier or later than that

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POLITICAL AND SOCIOLOGICAL

JAPAN, U.S. AGREE TO BEGIN JOINT STUDY ON DEFENSE COOPERATION

Tokyo MAINICHI DAILY NEWS in English 12 Jan 82 p 2

[Editorial: "Joint Defense Study"]

[Text]

Japan and the United States agreed during the 18th Japan-U.S. Security Consultative Committee meeting last week in Tokyo to begin a joint study on defense cooperation in cases of emergency in the Far East outside of Japan.

The joint study "on emergency" means bilateral consultations on the possible use of Japanese Self-Defense Force bases by the American forces or Japanese logistics support to the U.S. in military conflicts on the Korean Peninsula. The study is also based on the guideline of the U.S.-Japan cooperation adopted at a previous committee meeting.

The guideline stipulates, among others, the roles to be played by the United States Forces and the Japanese Self-Defense Forces to prevent possible aggression against Japan and to cope with the possible emergency cases in the Far East which may seriously affect the security of Japan.

The agreement on the joint study on the emergency cases in the Far East is regarded by some as the coming into the open of the "most dangerous point" in the U.S.-Japan Security Treaty.

As a prerequisite, the guideline said that the committee meeting would not discuss three problems — the prior consultation system, Japan's constitutional restriction and the three nonnuclear principles. The Japanese government has said that Japan's action would be limited within the present regulation and the interpretation of laws.

Lt. Gen. Charles Donnelly, commander, U.S. Forces in Japan, earlier called for the joint use of transportation systems, airport and harbor facilities and also Self-Defense Force facilities and equipment in cases of emergency.

These points may contradict Japan's basic defense policy and go beyond the scope of "individual self-defense right." Apparently aware of this, the government has been reluctant to begin the joint study on the emergency cases. Why then did the government reach the decision? The biggest reason for this was the government's efforts to improve U.S.-Japanese relations which have experienced rough sailing due to the so-called trade and defense frictions. We wonder if the emphasis on the defense efforts would help the two countries to erase such frictions.

The agreement also contradicts Japan's basic principle not to become a big military power and its pledge to create peaceful relations among Asian nations. Since the end of World War II, Japan has followed makeshift ways in its relations with the United States. The Japanese government must now establish comprehensive relations with the U.S. based on ideals and practices.

Decontrol Of Information

Kanagawa and Saitama prefectures are expected to become the first prefectures to implement the new ordinances for the decontrol of information in the hands of prefectural governments in September and December, respectively. Abundant information and materials should not be monopolized by the central or local governments because they are gathered for the people by the people's tax money.

The speed of information decontrol has been slow in the central government which has to deal with diplomatic, defense, and public peace and order. On the contrary, local governments have information closely related with the public life and some of them have actively studied the possible decontrol of information.

According to the Kanagawa outline, information compiled in the form of "official documents" would be available to the public in principle. Only seven items related with residents' privacy or police investigation of crimes would remain controlled. The outline said that business firms must also open their

information which will be "necessary to protect local residents from disasters, pollution and dangers from commodities."

Some questions remain. Should the process of decision-making leading to the decontrol be kept secret? How can prefectural residents acquire an enormous amount of information? We hope the prefectural authorities will fully examine the various cases in the new ordinance which will become the model for other prefectures.

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POLITICAL AND SOCIOLOGICAL

COMMENT ON AMBASSADOR MANSFIELD'S REMARKS ON BILATERAL RELATIONS

Tokyo THE JAPAN ECONOMIC JOURNAL in English 12 Jan 82 p 10

[Article by Susumu Ohara: "Another Perception Gap?"]

[Text]

The address by U.S. Ambassador Mike Mansfield at the Foreign Correspondents' Club of Japan last week remarkably differed in approach from his previous public statements on the U.S.-Japan bilateral relationship.

True, he first expressed high regard for Japan's special effort in increasing its defense budget for fiscal 1982. True, he repeated his "song" that the relationship between the United States and Japan is "the most important bilateral relationship in the world — bar none."

But the address was clearly different from his previous ones in that it urged only Japan to take actions to solve the current trade frictions. "We can point to the problems as we see them, but only Japan can take the actions to solve them," he stressed. In contrast, he never mentioned in the speech the need for the U.S. exporters to make greater efforts to penetrate into the Japanese market, although he said in his answer to a question later that his view on this remained the same.

The press luncheon was held at the request of the ambassador himself because he wanted to give his assessment of the current trade frictions before he leaves for home for consultations and home leave. He was "uneasy and concerned" about what might be ahead of the bilateral economic relationship in the months to come.

The message was clear, but it is doubtful whether it really reached the audience he aimed at. With only one exception, all the major vernacular daily papers in Tokyo carried his speech only in brief stories the next day. The ambassador knew that his remarks were "hard words for my Japanese friends and colleagues to hear." But it seems that they were not so hard at least to his friends in the Japanese media.

Or was this because the Japanese press did not like to hear any hard words from a foreign source? Probably not. The Japanese are rather overly sensitive to any critical words of them by foreign people, especially a great friend like Ambassador Mansfield.

The truth might lie, in my judgment, in the simple fact that there were no Japanese "press club" newsmen present as a group at the press luncheon. There were many Japanese journalists among the over-crowded audience, but most of them were present as individuals, not responsible for coverage of the speech. They left it up to the Kasumi (Foreign Ministry) press club members, most of whom wrote their articles based on the prepared text without showing up at the FCCJ.

They failed to take note of the importance of the ambassador's speech which was full of friendly advice and warnings. They saw nothing new in the address in terms of "specific" proposals. This in itself may illustrate another example of "perception gap" of the seriousness of the current economic situation between the Japanese and Americans.

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POLITICAL AND SOCIOLOGICAL

PLANNING FOR EMERGENCIES

Tokyo THE DAILY YOMIURI in English 10 Jan 82 p 2

[Editorial]

[Text]

The Japan-US Consultative Committee on Security Friday agreed to launch a study covering bilateral cooperation to cope with an emergency in the Far East. In concrete terms, the study is to determine in what ways Japan can support US military operations in case of another war in Korea.

The Japan-US security setup is a hollow promise if both sides are unable to cooperate with each other. Article 6 of the treaty allows the US to use bases in Japan to defend this country as well as the peace and security of the Far East. Naturally, Japan has to cooperate. And Japan cannot reject the planned study for that reason.

But the study should be carried out strictly within the limits of existing laws, including the constitution. The study of an emergency in the Far East should not be conducted unconditionally.

No Prior Obligations

As a precondition of the joint study, it is stated that both governments are absolved from taking mandatory legislative and administrative steps to implement the findings of the study. This means that Japan is under no prior obligation. Under this principle, Japan will be able to distinguish between areas where it can cooperate and where it cannot. Furthermore, the prior consultation system should be strictly applied in carrying out the joint study.

The restoration of Sino-Japanese and Sino-American relations has drastically changed the Korean equation. The US military presence in South Korea virtually rules out another military clash on the peninsula.

Contingency Planning

But, one must prepare for the worst. If ever there should be another clash in Korea, the possibility

arises that Japan could get involved, perhaps on the grounds of collective defense, although the constitution forbids such an excuse.

The US is not always right in its judgments. Japan needs to set up a system under which it can judge situations coolheadedly. The prior consultation system serves this purpose. Japan should also prudently study the repercussions of allowing US aircraft based in Japan to engage in direct battle.

During negotiations for the return of Okinawa, then prime minister Eisaku Sato gave a de facto "yes" to the sally of US aircraft from Okinawa. Today, such consent needs reexamination when it bears on the fate of this country.

Prime Minister Suzuki and other cabinet ministers should be kept directly informed of the nature of the studies. Otherwise, they may not be able to make a free decision in the face of a fait accompli.

The Diet, on its part, should conduct an in-depth study on security. Otherwise, the study of emergency situations may advance to such an extent that it has passed civilian control.

(January 10)

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POLITICAL AND SOCIOLOGICAL

SUZUKI BARES INSTRUCTIONS FOR JOINT SECURITY STUDIES

Tokyo THE DAILY YOMIURI in English 13 Jan 82 p 1

[Text] Prime Minister Suzuki Tuesday announced a set of "principles for national security studies," emphasizing the need for establishing a defense setup "well suited to Japan as a country encircled by the seas."

The premier's views on the nation's future defense priorities came in the form of instructions to Defense Agency Director - General Soichiro Ito and Chief Cabinet Secretary Kiichi Miyazawa after a cabinet meeting Tuesday morning.

In the extraordinary nine-point instructions, the prime minister also called for the Defense Agency to be "as prudent as possible" in its joint studies with the US on contingencies involving the Far East region, so as not to cause disarry with the Foreign Ministry and other government agencies.

Chief government spokesman Miyazawa said later Tuesday that the premier's concept of "defense setup befitting to a seagirt country" can be interpreted as meaning that Japan in its defense efforts should give priority to maritime and air defense capabilities rather than ground forces.

The new concept is in line with the premier's belief that the goal of Japan's defense efforts should be set at making this country a spiny "hedgehog" capable of driving back military attacks on Japan before enemy forces land, Miyazawa explained.

The "hedgehog theory," however, runs counter to the Ground Self-Defense Force's (GSDF) argument that land troops are the "core of military power" of a country.

The Defense Agency as a whole is in favor of a defense setup based on a "well-balanced buildup" of the nation's ground, maritime and air forces.

Indications are that the premier's "sea-encircled country's hedgehog defense setup" theory will cause strong reactions and opposition for "thinking light of ground forces."

Regarding relations between the premier-proposed new defense concept and the existing defense buildup program, Miyazawa suggested the possibility of the program being replaced by a new defense outline in favor of greater emphasis on the maritime and air defense capabilities.

Miyazawa quoted the premier as saying that the nine-point instruction were aimed at unifying views within the government on defense matters, since defense issues are certain to become a focus of discussions in the ordinary Diet session to be reconvened January 25.

Besides the "defense efforts well geared to Japan as a maritime country," the instructions also gave special importance to keep any "arbitrary moves" by the Defense Agency in check in dealing with defense-related problems.

In engaging in the recently agreed Japan-US joint studies on defense cooperation in the event of contingencies in the Far East, the premier's instructions said, the Defense Agency should use utmost prudence and be in close consultations without fail with other ministries and agencies concerned.

The agency should bear in mind the opinion that the Japan-US joint defense studies might lead eventually to a sort of collective defense setup, which was banned by Japan's constitution, the premier told Ito.

Adding to the constitutional issue, the premier instructed the agency head to be in close touch with the Foreign Ministry and

the Cabinet Legislation Bureau regarding possible revision of defense-related laws in connection with the Japan-US defense studies.

Reiterating the need for the Defense Agency to be circumspect not to go arbitrarily, the premier also reminded Ito of the need for close consultation in proceeding with the planned Japan-US exchange of military technology.

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POLITICAL AND SOCIOLOGICAL

SUZUKI ISSUES NEW DEFENSE CONCEPT

Tokyo THE JAPAN ECONOMIC JOURNAL in English 19 Jan 82 p 10

[Article by Yuji Koido]

[Text]

Prime Minister Zenko Suzuki recently instructed Director-General of the Defense Agency Soichiro Ito to strengthen the Maritime and Air Self-Defense Forces by "mapping out a defense plan or system appropriate for a maritime nation." The premier also counseled Ito that Japan needs to be "a porcupine" to be able to inflict heavy damages upon an invader.

Suzuki's instructions are, of course, designed to cope with an expected heated debate on defense in the coming Ordinary Diet sesion slated to reopen next Monday. The Defense Agency is planning, however, to review a fundamental defense buildup program again.

In addition, Prime Minister Suzuki has instructed Ito on the following points:

—The defense budget was expanded as a step to achieve the 1976 defense buildup plan, not to cope with the deteriorated international environment.

—The remaining defense budget outlays will be distributed equally in later years.

—The personnel cost accounts for 40 per cent of the 1982 defense budget (¥2,586.1 billion or 0.93 per cent of GNP), but the Defense Agency should consider a more efficient utilization of its budget.

—Japan and the United States agreed in a recent consultation to start formal studies on possible joint military actions in case of emergencies in the Korean Peninsula and the Far East. Such studies should not be done, however, in such a way that they invite criticism suggesting they will portend the enforcement of the right of collective self-defense. That is banned under the Constitution.

Commenting on Suzuki's instructions, Director-General Ito said, "This is the first time that the Premier has talked about defense comprehensively. He has asked me to search for ways to defend Japan in its own ways, so his instruction should be reflected upon the future course of our defense plan."

Yet, some officials of the Defense Agency have wondered why Suzuki "had given those instructions now." The argument that Japan should be "a porcupine" or strengthen its maritime and air forces is not new and has been discussed time and again in the past. Why then did Suzuki talk about defense now in such a comprehensive manner? Replies to this question may be threefold:

—It is inevitable that there will be a heated debate on defense in the coming ordinary Diet session slated to reopen soon, so the Suzuki launched a balloon against expected opposition grilling of government leaders.

—Suzuki wanted to place a brake on the defense budget, which has increased more substantially than others. That is, he wants to reduce the weight of ground forces in the budget and put more on maritime and air forces to build up major weaponry.

—The emphasis on maritime and air forces is designed to meet the U.S. request for a defense buildup in Japan's neighboring seas. This was clearly illustrated when a visiting U.S. Congressional delegation told Dietmen of the ruling Liberal Democratic Party that they highly appreciate Suzuki's 1982 defense budget which increased by 7.54 per cent over the previous year, but urged Japan to make

further defense efforts in different areas like securing sealanes to transport crude oil from the Middle East to Japan.

Among various instructions given by Suzuki, Defense Agency officials are especially concerned over repulsion of invading forces at Japan's waters' edge; a "porcupine"-like defense of Japan by utilizing highly-sophisticated surface-to-air missiles and the cost ceiling on the expansion of personnel. Furthermore, contrary to Suzuki's emphasis on maritime and air forces, the Defense Agency is seeking balanced growth in all three (ground, maritime, and air) branches of their forces, so the premier's instruction will invite another heated debate within the Defense Agency.

Another problematical point is whether Suzuki's instructions were issued after his consultation with the ruling LDP. There is a possibility that his instructions came out from a recommendation from Chief Cabinet Secretary Kiichi Miyazawa alone. Thus chances are likely that the Suzuki's instructions will be a target of debate within not only the Diet, but also the Government and the LDP.

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POLITICAL AND SOCIOLOGICAL

SOVIET-JAPANESE RELATIONS

Tokyo MAINICHI DAILY NEWS in English 9 Jan 82 p 2

[Editorial]

[Text] Prime Minister Zenko Suzuki called on the Soviet Union to exercise prudence in dealing with the Polish issue, sounding a warning that the Soviet government has been interfering indirectly in Polish affairs. He conveyed the warning through Soviet Ambassador Dmitrii Polyanskii who visited the prime minister on the occasion of his departure from Japan for reassignment.

There is no knowing exactly to what extent the Soviet Union has been involved in Poland's crisis. Judging from the position of Poland and Soviet-Polish relations, we cannot say that the Soviet Union had nothing to do with the recent turn of events there. Polish Prime Minister Wojciech Jaruzelski said he had taken the step toward military rule in order to avoid "a civil war." There is little doubt that by civil war he meant Soviet military intervention as in the case of Hungary and Czechoslovakia.

The biggest concern of the world in connection with the Polish problem is whether or not there exists Soviet military intervention. In this regard, the United States and Western European countries recognized the existence of the Soviet Union behind the developments of the Polish situation and called on the Soviet leadership to exercise self-restraint. Prime Minister Suzuki has taken a similar step by issuing a warning to the Soviet Union.

The Eastern European crisis poses a very difficult problem for the West because it is impossible to expect radical reform or a change by force in this area, given the strength of the Soviet Union which regards the area as its sphere of influence as a result of victory in World War II. The Western side believes

that fundamental human rights are not fully guaranteed there.

Against such a background, the West has been very careful in dealing with the Eastern European problem. Their cautious manner, on the other hand, has helped the Soviet Union to strengthen its control of Eastern Europe. The only thing left for the West is to keep on expressing its concern and calling on the Soviets to exercise restraint. All we can do is to wait for a gradual liberalization of the Soviet Union and Eastern Europe as a whole through a revival of detente. The liberalization of Eastern Europe through increased exchanges between the West and the East made little headway mainly because detente was on the wane.

Thus viewed, the future of the Polish issue lies in the diplomacy vis-a-vis the Soviet Union. The keynote of diplomacy toward the Soviet Union is to speak out when we must without closing the road leading to dialogue. Prime Minister Suzuki also expressed high expectations for the top-level consultations between the two countries scheduled for Jan. 20 in Moscow.

It was the first time since February 1978 that the Japanese prime minister had met the Soviet ambassador. In the face of the chilled relations, we sincerely hope that bilateral dialogue will soon be revived.

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POLITICAL AND SOCIOLOGICAL

EDITORIAL OUTLINES IMPORTANT AIMS OF POLITICAL CIRCLES IN 1982

Tokyo THE JAPAN ECONOMIC JOURNAL in English 12 Jan 82 p 10

[Editorial: "Politics in 1982"]

[Text]

The three most important acts demanded of Japan's political circles in the new year of 1982 undoubtedly will be vigorous promotion of administrative reforms, elimination of trade frictions, and adequate handling of the expected serious aftermaths of the court decision on the Lockheed payoff case.

Why is vigorous propulsion of administrative reforms so important? It is not simply because the Suzuki Administration's fate virtually depends on it. It is vital, first of all, because a complete review of the nation's entire administrative and dependent systems is mandatory, now that the Japanese economy has definitely run into a slow-growth period.

Administrative reforms are also necessary if Japan truly wants to prevent its economy from developing a recalcitrant disease of its own, similar in nature to those plaguing other advanced countries. A complete review of welfare systems is especially urgent.

Another rationale for administrative reforms is the fact that if the government deficits are long left at the current exhorbitant levels, it will not only rob public finances of highly-needed maneuverability and effectiveness but also may very well lead to vicious inflation.

As to international frictions, the crisis had barely been avoided for the time being as Japan hiked the growth rate of its defense budget for the new fiscal year to 7.75 per cent at the end of last year. This apparently appropriate step, however, seems to be highly unpopular not only among politicians but also among the general public. Many of those who are opposed to higher defense outlays maintain that as long as Japan is under the Peace Constitution, it should do its part in international cooperation not in the field of military hardware but in economic assistance. Some, on the other hand, believe that

Japan need not follow the footsteps of the Reagan Administration which seems to be committed to outright confrontation with the Soviet Union.

The contentions of those opposed to greater defense appropriations are understandable to some extent, it is true. Are those people, however, really aware of the fact that not only the Americans but also EC member countries are convinced that Japan's economic prosperity depends primarily on its penny-pinching in the field of defense? It is futile in the face of such a strong conviction to try to reason with them that economy and defense are two different things. We cannot simply ignore the fact that such a view is widely prevalent in Western countries and that this conviction is now being further fanned up by the reality of the severe 8-9 per cent unemployment rate. Japan has to pay "social expenses" for the sake of peace.

Moreover, it is doubtful whether the Japanese people are willing to increase the nation's economic cooperation to other countries by all that much. At present, Japan's ODA (official development assistance) represents a mere 0.34 per cent of the nation's GNP. Are the Japanese people truly willing to increase the ratio to the 3-4 per cent level, the ratio of defense expenses against GNP in EC countries?

The final outcome of the Lockheed payoff case involving former Prime Minister Kakuei Tanaka is, of course, anybody's guess at the moment. It is, however, clear that the court decision on the case, when it comes, will have serious repercussions not only the Tanaka faction and the Liberal Democratic Party as a whole but also on the entire Japanese people. How will the ruling party cope with the expected repercussions? As long as Japan's democracy and the people's confidence in politics depend strongly on the conservative party's reactions to the final court decision, it is necessary from now to be fully prepared for the eventuality.

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POLITICAL AND SOCIOLOGICAL

COMPLICATED TIES BETWEEN NAKASONE, WATANABE

Tokyo MAINICHI DAILY NEWS in English 13 Jan 82 p 2

[Article by Takehiko Takahashi]

[Text]

On Jan. 1 a tent was put in the garden of Administrative Management Agency Director General Yasuhiro Nakasone's residence (which is being rented from former Giants Manager Shigeo Nagashima). Tables were placed here and there in the garden. Many New Year callers were there. Among those who stood out were Foreign Minister Yoshio Sakurauchi and Finance Minister Michio Watanabe.

Foreign Minister Sakurauchi is a member of the Nakasone faction. Finance Minister Watanabe belonged formerly to the Nakasone faction but left it over a difference of attitudes toward the Ohira administration. Nakasone was anti-Ohira while Watanabe supported Ohira.

Watanabe later formed his own group but then began to have contact with Nakasone again and on Jan. 1 Watanabe was one of the callers at the Nakasone residence to express New Year greetings.

Nakasone smiled broadly as he welcomed Watanabe. This is because it was felt that for Watanabe, who is gaining stature as a new leader, to call and express greetings to Nakasone on New Year's Day would have value in strengthening Nakasone's political position.

Foreign Minister Sakurauchi asked Finance Minister Watanabe, "What is your course today?" To this, Watanabe replied, "The same as yours." When Sakurauchi continued with "What about the shadow general?" Watanabe answered, "That too is the same as with you."

Before calling on Nakasone, Finance Minister Watanabe visited the Mejiro residence of former Prime Minister Kakuei Tanaka and expressed his New Year greetings to Tanaka. Gathered at the Tanaka residence were many politicians of the Tanaka faction. Speaking to them, Watanabe said, "I ask for your cooperation," and raised a toast felicitating the future of the Tanaka faction.

Influence Of Tanaka

It is said that this year again, about 400 persons called to express New Year greetings at the Tanaka residence. The influence of the Tanaka faction and the strength of Tanaka himself were apparent. Among the callers were members of the present cabinet and party officials, as well as leaders of the political world and prominent government officials.

Presenting a decided contrast to this show of influence by Tanaka was former Prime Minister Takeo Fukuda. For about one week from the last year-end to the first part of January, Fukuda left Tokyo and rested in Miyazaki Prefecture. One year ago it had been the same. If Tanaka represented "movement," then Fukuda showed "repose." It was certainly a contrast.

It is a fact that Nakasone is aiming for the premiership. That is only natural. After the Sato administration, four men — Tanaka, Fukuda, Ohira and Miki — vied for the premiership. All four have since become prime ministers.

At first Nakasone supported Tanaka. This obstructed the birth of the Fukuda administration and in the next general election, the votes cast

for Nakasone showed a big drop (Nakasone is from the same third electoral district of Gumma Prefecture as Fukuda).

When the first open election of the party president was held, Fukuda, Ohira, Nakasone and Komoto were the candidates. Contrary to the earlier prediction, Ohira ranked first in the preliminary voting. Fukuda declined candidacy in the main election (by Diet members affiliated with the Liberal-Democratic Party), with the result that Ohira became the party president. Following the birth of the Ohira administration, Fukuda, Komoto and Nakasone became an anti-mainstream existence. But in the voting on the nonconfidence motion against the Ohira cabinet, Nakasone separated from Fukuda and Komoto and supported the Ohira administration.

Nakasone today is thinking that receiving the backing of the Tanaka influence will open the path to the premiership. His policy is therefore to cooperate with the Suzuki administration that the Tanaka faction is supporting.

Following the death of Ichiro Kono, Nakasone succeeded to his faction. Nakasone is facing difficulties as the boss of a faction. Not much time has passed as yet after Komoto became a faction's boss. Therefore, the only boss of established factions who has not yet become the prime minister is Nakasone. For that reason, it is perhaps only natural that Nakasone is strongly desiring the LDP presidency.

For Nakasone, the attitude taken by Watanabe, who is gaining strength as a new leader, is a matter of great concern.

When Watanabe called at Nakasone's residence, Nakasone stepped forward eagerly, bowed first and grasped Watanabe's hand. This was an indication of Nakasone's expectations being placed in Watanabe.

It is questionable, however, whether Watanabe will take political action in exactly the way desired by Nakasone. This is clear from the fact that Watanabe visited the Tanaka residence first on New Year's Day before calling on Nakasone.

CSO: 4120/128

POLITICAL AND SOCIOLOGICAL

EDITORIAL ON ADMINISTRATIVE REFORM

Tokyo MAINICHI DAILY NEWS in English 11 Jan 82 p 2

[Text]

The Second Ad Hoc Council on Administrative Reform is scheduled to submit its interim report this month and a basic recommendation in June or July, and Prime Minister Zenko Suzuki will face the crucial moment when he must give full play to his leadership.

The prime minister has often declared that he has been staking his political career on administrative reform. In this regard, we hope that he will demonstrate his "unfaltering posture" to tackle the issue. In reality, however, we are disappointed with him as he has been lukewarm toward the realization of the council's first recommendation during the past year. Even Chairman Toshiwo Doko and other members of the council expressed their dissatisfaction. It seems that the prime minister betrayed the expectations of the nation.

Prime Minister Suzuki submitted a package bill calling for reforms, but he had simply picked up those items in the recommendation that might encounter least resistance from the bureaucrats and other pressure groups. Many vested interests were left untouched. The proposed cut in government subsidies was insufficient. In the compilation of the 1982 fiscal budget, he also failed to trim the budgets related to agriculture and forestry.

It is thus small wonder that Chairman Doko declared he was greatly dissatisfied with the outcome. The government itself was reluctant to carry out a scale-down, while attempting to increase revenues in an easygoing manner. The essence of administrative reform is for the government to trim its overly expanded size. This the government neglected completely.

No matter how splendid the recommendation may be, the reform will make little headway unless the government is determined to carry it out. All depends on the determination of the prime minister.

In the first place, the prime minister should not

mix administrative reform with fiscal reforms. The prime minister contends that the administrative and fiscal reforms are like both sides of a coin. It may be so as a matter of consequence, but the two problems are originally on different planes. Administrative reform should not be subsidiary to fiscal reform. The primary purpose of administrative reform is to realize a "simplified, effective" government by paring the fat off the administration to meet administrative demands in the new age. As a matter of consequence, it may lead to fiscal reconstruction, but that is not the final aim.

An opinion is prevalent in some quarters that administrative reform tends to invite repression. Such a voice is heard even within the government circles, but the Suzuki cabinet should overcome such a negative view since the realization of a small government by administrative reforms is the only way for the govermnent to meet the expectations of the people. Thoroughgoing review of government spending is the unanimous call of the people now suffering from an increased burden of taxes and public utilities rates.

The prime minister should also pay all-out respect to the recommendations of the council. So far he has capitalized on the recommendations to cover the shortcomings of the administration. He has shown a posture as if he were willing to delegate part of his authority to the council, but it turned out to be a mere gesture, an empty stance. This is nothing more than the negligence of political duties on the part of the prime minister.

We must call on the prime minister to redouble his efforts in smashing the uncooperative attitude of bureaucrats toward administrative reform. He must overcome the resistance of interest groups. The administrative reforms of the past failed simply because they were watered down before being submitted to the Diet, largely due to the uncooperative attitudes of the bureaucrats. In order not to repeat the same mistake, the prime minister is urged to demonstrate strong leadership through his cabinet ministers.

Now that he has repeatedly promised the nation, we believe that not only his leadership but his own cabinet is at stake. Any half measure designed to postpone the execution of reforms will only speed up the collapse of the government.

It is regrettable to note that the nation is losing interest in reform. The prime minister should be held solely responsible for this.

CSO: 4120/135

POLITICAL AND SOCIOLOGICAL

FOREIGN MINISTER WARNS STAFF TO PREPARE FOR 'ROUGH WEATHER'

Tokyo THE DAILY YOMIURI in English 10 Jan 82 p 2

[Article by Minoru Hirano]

[Text] Foreign Minister Sakurauchi noted in his New Year address to the Foreign Ministry staff on January 4 that Japan was blessed with fine weather on the first three days of January, that he wished the world's weather would stay just as fine this year, but that this was unlikely to happen. He thus warned the staff to be prepared for rough weather.

Sakurauchi's warning was pertinent. The domestic situation in Japan is peaceful and tranquil. The Japanese think they are living in the most peaceful country on earth and are the happiest people in the world. They were slightly uneasy about their future at the outset of the 1980s. Now they are confident of the future because they believe Japan will be able to lead the rest of the world in such frontier technologies as electronics, robotics and biotechnology. Most Japanese newspapers in their New Year supplements featured industrial robots, and this is symbolic of the future of Japan. Optimism in Japan has expanded further as the specter of OPEC's dominance over the world was laid to rest and oil prices have begun to decline.

What is the actual international situation surrounding Japan?

The Foreign Ministry sizes up the situation as follows:

- All problems requiring quick solutions, such as the Soviet occupation of Afghanistan, the Iran-Iraq War and the Kampuchea problem, have been brought forward, unsettled, into the New Year.
- The enforcement of martial law in Poland and Israel's annexation of the Golan Heights have intensified tensions in Europe and the Middle East.
- Because of these regional disputes, it is difficult to predict what course the US-Soviet nuclear arms reduction talks will take.

The Foreign Ministry's conclusion is that 1982 will be an even more unstable and uncertain year than 1981.

Quite a few scholars warn that in such an international climate, Japan should not sing the praises of peace and chortle its self-confidence to the rest of the world, that Japan is earning foreign frowns for its excessive emphasis on economic muscle, that Japan should not forget that the US' and Western Europe's concern over Soviet military strength and the instability in the Middle East is behind the trade friction between Japan and Western countries, and that 1982 will be a year when Japan's isolation from the rest of the world will become prominent.

Aware of such a probability, the Japanese Government increased defense spending in the fiscal 1982 budget by 7.75 percent over the preceding year to show Japan's willingness to perform its defense role within the Western camp. US Secretary of State Alexander Haig and Secretary of Defense Casper Weinberger immediately addressed letters to the Japanese Government saying that they highly appreciated the Japanese step.

The Japanese Government also hoped to allay trade friction through increased defense spending because the US has complained that Japan, by free-riding the Japan-US security treaty and spending too little for defense, was making large surpluses in its trade with the US.

However, US Ambassador to Japan Mike Mansfield crushed this hope on January 6 when he made a distinction between the defense problem and the trade issue, saying that the cause of trade friction between Japan and the US and Japan and Western Europe was in the closed character of the Japanese market.

Criticism of Japan by the US and Western Europe is also directed against the fact that Japan depends on exports rather than domestic demand to spur its economic growth. In the government budget for fiscal 1982, a reduction of interest is the only step aimed at stimulating domestic demand while both fiscal policy and the tax system are to perform the roles of dampening domestic demand.

Then, trade friction between Japan and Western countries will escalate in 1982. Foreign Vice-Minister Ryozo Sunobe predicts a violent storm.

CSO: 4120/135

MILITARY

SECURITY PANEL APPROVES JOINT DEFENSE STUDY

Tokyo MAINICHI DAILY NEWS in English 9 Jan 82 p 1

[Text] **Another milestone was set in Japan-U.S. defense cooperation Friday. The 18th Japan-U.S. Security Consultative Committee (SCC) agreed to begin a joint study on defense cooperation in cases of emergency in the Far East outside Japan.**

The joint study was proposed in the guidelines for Japan-U.S. defense cooperation, which were adopted at the previous meeting of the SCC held in November 1978.

With Friday's agreement, the two parties will start working within one month on joint defense scenarios, taking into consideration existing constitutional restraints and related domestic laws.

The SCC is the highest consultative organ on the operation of the Japan-U.S. Security Treaty which went into force in 1960.

Japan's contribution in an emergency would mostly concern logistics — supply, transportation and communication. More importantly, however, it could also involve providing Self-Defense Force bases for the U.S. armed forces.

The Japan-U.S. defense guidelines also called for studies on actions to be taken in case of a direct attack on Japan and measures to deter aggression.

The studies were completed last year, and the only remaining subject was defense cooperation in cases of emergency in the Far East, notably, the Korean Peninsula.

Friday's meeting, held at the Foreign Ministry, was participated in by Admiral Robert Long, commander of the U.S. Forces, Pacific, U.S. Ambassador to Japan Mike Mansfield and other U.S. officials.

The Japanese delegation was led by Yoshio Sakurauchi, foreign minister, and Soichiro Ito, director general of the Defense Agency.

By most accounts, however, it is an agreement that creates questions. It presupposes a more active Japanese role in joint defense and the chances of Japan being drawn into a war would be far greater.

It would also run counter to the Japanese Constitution, which does not allow Japan to take action in collective security.

However, the Suzuki government, which wants to ease the trade friction with the United States, has apparently decided to align itself more closely to the U.S. in the field of defense.

The government already has announced a sharp 7.75 percent increase in defense spending for fiscal 1982 and is elated by appraisals coming from Washington.

The indications are that the joint study on Far East emergencies and the sharp increase in defense spending will be hot issues at the Diet which reopens later this month after the winter recess.

At the outset of the meeting, the two parties exchanged views on international affairs, notably, the situation in Asia.

Admiral Long stated North Korea has advantages over the South in every aspect of military power.

But South Korea is politically stable and if it is combined with a firm American commitment and steady defense buildup, a military conflict on the Korean Peninsula is unlikely, he said.

Both Long and Ambassador Mansfield stressed attention must be focused on the Soviet capability in evaluating Soviet might because intention could

change overnight.

Foreign Minister Yoshio Sakurauchi said the Soviets are faced with a number of serious problems; the economy, minorities, Afghanistan, and Poland.

But despite these difficulties, Sakurauchi said, the Soviets are steadily expanding their defense capabilities and the West must keep a close eye on them.

He also said the South Korean economic situation is quite bad and Japan is willing to make as large an economic contribution as possible based on the principles of economic cooperation.

While highly appraising the substantial increase in defense spending for fiscal 1982, the Americans stressed that the momentum should be carried in more defense spending, defense cooperation, and technological cooperation.

But the Japanese side refrained from making a firm commitment to the transfer of military technology to the United States. Soichiro Ito, director general of the Defense Agency told the Americans that the government is now working hard formulating principles for technological transfer.

Major General Moore, chief of staff, U.S. Forces, Japan, later told the press at the U.S. Embassy in Tokyo: "We believe we should naturally be combat ready now, completely ready. We believe that the government of Japan and people of Japan perceive that there is a basic need. We would like to see this happen as soon as possible based on what we perceive to be a definite threat that has to be met.

"If they (Japanese) determine there's got to be a dramatic change or rapid buildup, we should be prepared to assist them. We should also be patient enough to know in their democracy that it takes time.

"We would like to see a successful capability, successful in combat tomorrow. We know it's going to take longer than that and we're going to work closely with them in a projective period...to see they are ready to meet their responsibility to the country and our responsibility to our allies."

CSO: 4120/135

MILITARY

EFFECTS OF INCREASED DEFENSE SPENDING ON ECONOMY VIEWED

Tokyo MAINICHI DAILY NEWS in English 10 Jan 82 p 2

[Editorial]

[Text]

We have noticed the emergence of a dangerous sign in Japanese economic circles. Yoshihiro Inayama, president of the Federation of Economic Organizations (Keidanren) and three other top business leaders have told a joint press conference that national defense and social welfare must be treated as two different things, and also that the defense expenditures in the fiscal 1982 budget draft are reasonable.

In the statements of these business leaders, we noticed a generous chorus of support for an expanded defense capability. At the same time, we also know that not a small number of businessmen, especially those in the service industry, are opposed to the defense expansion. But the statements at the press conference seem to have exposed an undercurrent among business leaders who have become tolerable toward military expansion after the repeated American requests for a bigger Japanese role in this specific field. We regard this as a dangerous sign because we doubt that military expansion and civilian vitality or economic development can coexist.

In the postwar days, Japan achieved the highest economic growth rate in the world. It has been regarded as a model in this respect because of its light military outlay under the war-renouncing Constitution. This has also been proven by historical fact when we compare Japan with the United States. In short, among the democratic nations, the productivity of Japan, whose military burden was light compared with its gross national product (GNP), has been exceptionally high while the productivity of the United States, the super military

power, has been the lowest.

Japan's defense outlay remains less than one percent of its GNP and the total production of the defense industry is also less than one percent of the total industrial output. Accordingly, economic circles still remain optimistic that the vitality of the Japanese economy and economic development would not be hampered by the militarization of the economy.

Japanese economic circles believe that civilian vitality must be maintained and that the free economic system must be protected. We believe that the business leaders must bear the responsibility of thinking about the future of the Japanese economy from a long-range viewpoint.

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ECONOMIC

U.S.-JAPAN PERCEPTION GAPS, TRADE IMBALANCE PROBLEMS DISCUSSED

Tokoy JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan, Vol 20, No 989, 19 Jan 82 pp 19, 24

[Two-part article by Aritoshi Soejima: "U. S.-Japan Perception Gaps and Trade Imbalance Problems (1)"]

[12 Jan 82 pp 24, 19]

[Text] After nearly 32 years of service with the Japanese Government I retired from public life last October. In retrospect, a history of my public service could be viewed as the postwar history of the Japanese economy.

During the first 15 years, from 1950 to 1965, Japan was internationally ranked as a developing country. The country was trying to rise from the damages of the war. Aspiring to a standard of living comparable to that of the Western countries, all of the Japanese people worked exhaustively. Fortunately, those were the years when a free trade policy of the Western countries prevailed under the GATT-IMF system, from which Japan greatly benefitted.

During this period, the Japanese Government was able to adopt a protectionist policy which was legitimately accorded to the developing countries. In order to protect domestic industries from foreign competition, both trade and foreign exchange transactions were subject to strict control.

The 16 years from 1965 until my retirement saw Japan's transformation into the rank of an "industrialized country" under the IMF-GATT system. Japan's GNP grew at an unprecedented rate through active importation of foreign capital and technology as well as perpetual efforts to elevate our industrial structure and to expand our exports.

With the objective of achieving an economy with features similar to those characterizing the economy of other Western countries and in order to fulfill international responsibilities as an industrialized nation, substantial liberalization measures were taken and structural upgrading of the economy took place.

This history of the post-war Japanese economy coincides with my history at the Ministry of Finance. The first 15 years of my work were basically devoted to the procurement of funds from the IMF/World Bank or from the capital markets of the industrialized countries, as Japan was chronically suffering from a shortage of foreign exchange. But I spent a major portion of the latter half of my public life in promoting the liberalization and restructuring of the Japanese economy as well as developing measures to provide loans and credits to the third world and international organizations.

Throughout these years I have personally witnessed the strength of the Japanese people and their adaptability to changing external circumstances. I took great pride in being Japanese.

Candidly speaking, when I returned from military service to a totally destroyed Tokyo 36 years ago, I had grave doubts as to how Japan could survive, let alone, achieve today's affluence which was beyond anyone's imagination.

However, history changes the people, the country, and the world. With half of the population now being the post-war generation, there are few Japanese who know that Japan was labeled as a "developing country" until only 15 years ago and that overseas sightseeing travel, for instance, was then prohibited. This lack of knowledge about the rapidly changed

economy of Japan also applies to Westerners. Many foreigners do not realize that Japan had a "developing country" status until 15 years ago and simply assume that we have always enjoyed the same kind of living standard that they have long had. I feel that the major perception gap between the U.S. and Japan is based up on this point.

Experiences in the U.S.

Twice I have had occasions to live in the U.S.: for six years from 1962 to 1968 and again for two years from 1979 to 1981. I personally witnessed during these two periods how substantially the American perception of Japan has changed.

When I first went to live in America in 1962, the U.S. was still a global giant and Japan a small Far Eastern nation. Hardly any news of Japan was ever seriously treated in the mass media then. When there was a write-up on Japan, the tone was warm, as though an adult were observing a good child. Needless to say, a knowledge of Japan by average Americans was then virtually nil. Only the few who had spent post-war occupation years in Japan as soldiers or a handful of people acquainted with Japan had a rather pro-Japanese sentiment then.

But the second time I went to live in Washington in 1979, the American perception of Japan had changed greatly. The Americans no longer treated Japan as a child but regarded us as their equal. News and write-ups about Japan appeared almost daily in U.S. newspapers. The tone of the articles also changed from positive to neutral to negative.

At the same time, the Americans began to know more about Japan, although differing in degree by states and somewhat influenced by negative or critical voices of American business groups which had lost out to increasingly competitive Japanese industries. There are some who are familiar with Japan and express their concern over the present situation, but they are generally less vocal.

An image of Japan, which is so distant from what Japan really is, began to emerge. What worried me most was the fact that the misperception of Japan was strengthening in the American political circle.

This concern led me to personally visit all 50 states to lecture and to exchange views with the American people at large. I also contributed to university magazines published by Harvard, Yale, etc., to eradicate the American misperceptions of Japan.

However, the U.S. is a large country. As a federal nation, individual states have more autonomous strength than our prefectures.

Large businesses also have an enormously strong influence on political and economic decision makers. Unfortunately, unfounded criticism of Japan expressed by a few large American enterprises can influence public opinion or Congressmen of certain states, who in turn can affect the entire U.S. public opinion. Witnessing such political processes at work with my own eyes is a very frustrating experience.

However, truth must persist, too. Regardless of how long it may take and what difficult efforts may be required, it is our responsibility to correct the misperception of Japan held by many Americans. It is of paramount importance for the stability of the world that the U.S. and Japan — the largest and the second largest economies of the free world — develop mutual understanding. Particularly worrisome is the impact that U.S. protectionism would have on the world economy. Such a tendency toward protectionism on the part of the U.S. must be prevented, especially if perception gaps develop attributable to such a move.

It may be useful to briefly review the changing relative positions of the U.S. and Japanese economies in the past 30 years. At the risk of oversimplification, I would like to point out the following four features:

1. The gap between the U.S. and Japanese economies narrowed tremendously. While the per capita income of the U.S. was 11 times that of Japan in 1950, it is a mere 1.2 times today.
2. Japan's bilateral trade balance with the U.S., which showed chronic deficits in the 1950s began to yield stable surpluses beginning in the mid-1960s.
3. While the U.S. economy showed strength throughout the 1950s and until the mid-60s, inflation seems to have been built into the economy since the Vietnam war. The economy began to falter and its performance has been particularly poor in the last three years. The GNP growth rate dropped to minus 0.1 in 1980, the inflation rate has been double digits, and the productivity growth rate has been negative since 1978.
4. The Japanese economy showed remarkable growth throughout the post-war years. While it stagnated after the first oil crisis, it has been growing stably since 1975.

Factors for bilateral problems

Some of the notable phenomena resulting from the strong Japanese economy and contrastingly stagnant U.S. economy are as follows:

1. The higher rate of yen in the foreign exchange market
2. Expanding Japanese trade surpluses with the U.S.

3. Increased Japanese investment in the U.S.

I would like to confine my discussion to the problem of the increasing and perpetual Japanese surplus.

Trade is so crucially vital for the Japanese economy. The only means of survival for Japan, with a population of nearly 120 million and without any meaningful natural resource endowment, is to import raw materials, process them and export manufactured products abroad. It shows a stark contrast with the U.S. which has abandunt resources and a large domestic market that have made export markets rather peripheral in importance, at least in the conscience of most Americans, until recently.

Virtually every Japanese is aware of the crucial importance of trade. Perhaps the following phenomena underline this awareness: despite our generally poor language aptitute, the Japanese study foreign languages very diligently; our trading companies always rank among the most popular career choice of students; most Japanese enterprises are strongly motivated to export their products; the Japanese tend to prefer foreign-made goods (although most Americans perceive us contrarily).

[19 Jan 82 pp 24, 19]

[Text] The Japanese have started from literally zero at the end of World War II. Knowing that survival of the Japanese economy was only attainable through trade, both the private and public sectors of Japan attached priority to training their staff, securance of raw materials and exports of manufactured goods.

The first priority was to send younger people abroad to study and receive training. Most Japanese organizations started this system immediately after the war, which was by no means an easily manageable task under the limited economic strength of Japan in those days.

Not only large firms but virtually all entrepreneurs who are interested in foreign trade have maintained this system of sending their staff abroad. The fact that a large proportion of Japanese students in American graduate schools are sent by their employers indicates the degree to which Japanese firms invest in training their staff for overseas business.

The second notable feature of Japanese firms is their eagerness to secure resources. For Japan which relies for most of its natural resource needs on foreign supplies, securance of resources is crucial. This explains why initial Japanese foreign investments in Southeast Asia, the Middle East, Australia, the U.S. and Canada were approved even in the days of scarce foreign exchange reserves. The extent to which the 1971 U.S. embargo of agricultural products to Japan as well as the 1973 oil crisis put the entire country into a state of panic describes out total dependence upon imports.

Thirdly, Japanese firms have made impressive efforts to develop export markets. When I was an economic advisor in a West African country some 15 years ago, I was astonished to meet a representative of an obscure Japanese company selling their products in the remotest villages. There must be over 100,000 Japanese businessmen living in the U.S. today. The number must exceed the total businessmen from the EC living in America.

Moreover, in 1956, the year I first went to the U.S., Japanese products were synonymous with "cheap but of poor quality." The reputation Japanese products enjoy today reflects the crystalization of the painful efforts every Japanese has made with many trials and errors as well as financial losses over the past few decades.

Developing a new foreign market requires a tremendous investment of both financial and human resources. I have witnessed many instances where enterprises felt too defeated to continue and left the country which they had decided to enter. On the other hand, however, I also know of many firms which are successful abroad, only after having overcome many difficult obstacles.

structions (Penta-Ocean), odds and ends among the machineries (Tsubakimoto Chain), and a wide assortment of scattered others whose only characteristic in common was their manipulation by many ad hoc task forces of corporate treasurers, financial institution fund managers, "investment consultants," and securities salesmen operating with large discretionary accounts. Par for the course, in other words.

A segment of the nonferrous metals rates special comment. Sumitomo Metal Mining, plaything of old Ginzo Korekawa, came alive again as nostrils flared over the rich gold seam it's supposed to be digging up down around Kagoshima. On 3 of the 4 trading days it accounted for 10 per cent of total first section volume, and on Tuesday that and 2 others (Mitsui Metals, Mitsubishi Metals) absorbed no less than 38 per cent. In Mitsui's case the incentive, boiled down to its essentials, was that it owns a gold mine in Kagoshima right next door to Sumitomo's. In this and almost all other cases, interest in the new faces arose primarily because their margin balances and share prices were relatively low; the search for respectable rationales followed, with results of varying degrees of believability. At bottom it was that simple: Kabutocho is not a sophisticated milieu.

All this was of course a continuation of the flavor shown so far this year — and the last quarter of 1981 too, for that matter; it's just that the speculation became more blatant and the fundamental figleaves smaller. It arose because foreigners were still largely absent, what with U.S. short-term interest rates up and the yen slightly down and all. In Kabutocho's new dialectic (since last year) that was problem of very complicated distribution channels in Japan. Many layers of intermediaries, including trading companies and wholesalers, exist between producers and consumers. But it is a unique feature of the Japanese market which has been developed against a completely isolated historical background. These are facts of life in the Japanese society which are not intended to discriminate exclusively against foreigners.

Admittedly, mastering the Japanese language is next to impossible for many foreigners. The best alternative to overcome that handicap is to select and train promising Japanese nationals for their management.

The one encouraging trend is that many American firms are increasingly promoting Japanese to their top managerial positions. The more successful an American company is in Japan, the more adapted they are to the Japanese society and the more Japanese staff they tend to have.

Ideas for alleviation

Ever since the Tokyo Round of negotiations started, Japan's bilateral trade surplus with the U.S. has been a serious issue with the U.S. Government. Indeed, the increasing surplus must be irritating to many Americans.

I, for one, however, who was involved with the Tokyo Round of negotiations and served as the Financial Minister to the U.S., am not completely convinced that American complaints are always valid. Part of the reason I am not convinced is that the complaints are often based on the outdated image, or the misperception as described earlier, of Japan held by many Americans. And that is the closed nature of the market.

While I think the Japanese economy is as open as many European economies with the sole exception of West Germany, I do admit that frequently mentioned import inspection procedures, medical inspection procedures, auto inspection systems are too complicated by any international standard.

Fortunately, the U.S. Government recently came up with a 9-item specific proposal for Japan to improve imports, one covering tariff reduction on 29 products and the other eight relating to NTBs. Many of these items are rather convincing. While I don't think full acceptance of the proposal will substantially improve U.S. exports to Japan, we must do what we can immediately in view of today's massive trade imbalance.

What I would like to stress here, however, is that I don't think any measure taken by the Japanese side alone can solve the bilateral trade imbalance.

In the first place, it is not even appropriate to discuss bilateral trade surpluses or deficits. Half of Japan's imports is petroleum. In order to pay for the oil, Japan must earn foreign exchange elsewhere. Moreover, our invisible trade account has been yielding large deficits. In order to promote foreign assistance and investment, Japan must earn surplus in its trade balance.

Excellent management of the Japanese economy has been envied by many countries. What must be noted here is that it is the efforts made by enterprises as well as the sense of responsibility and discipline of individual labor in this country that should be admired.

Were we to leave the situation as it is, Japan's surplus is bound to accrue even more. It will further exacerbate the American public opinion, and if

the worst comes to the worst, it can invite a situation where the protectionist tendency cannot be prevented in the U.S. The U.S. Administration has been consistent in defending free trade and fighting protectionism. However, the check and balance mechanism in the U.S. Government gives an enormous power to the U.S. Congress.

Then how should the imbalance problem be alleviated? I would like to give personal thoughts below:

1. The imbalance problem ought to be solved not by voluntary export restrictions of the Japanese companies but through increased U.S. exports to Japan.
   a. Both the U.S. and Japanese Governments must recognize that voluntary export restrictions are not helping either country. The past voluntary restrictions of steel or TV sets proved the point. The ongoing auto case is likewise to end in a similar result.
   b. The U.S. should bring to a halt the damaging built-in inflation and restore a "strong America." America has the fundamental strength. Advanced technology which landed men on the moon or operated the space shuttle is simply awesome. There are many other competitive industries; the aircraft industry, information industry, petroleum industry, service industry, to name a few. I am among the very first to pay the highest respect to the enormous potentials of the U.S. economy and believe that it can revitalize if only enough resolutions are made.
   c. When I lived in the U.S., I did find many products in America which would be successful in Japan if only they could be tailored to the Japanese taste. The point here, again, is the efforts to be made by American firms to develop export markets (there was no Japanese who predicted 10 years ago that McDonalds would be so successful in Japan.)
2. Japan must pursue an orderly export policy and not forget that a sudden upsurge in exports (no matter how popular a certain product may be) is disruptive and can trigger domestic problems in importing countries. This is essential, if Japan wants to maintain free trade. After all, the greatest beneficiary of free trade is Japan.
3. As the long-term solution, I can recommend, among others:
   a. Further promotion of Japanese firms to produce in the U.S.
   b. U.S. export of the Alaskan oil to Japan.
   c. More export of U.S. coal to Japan.
   d. More entry into Japan of the tertial sector industries.
   e. It is essential to coordinate both economic and monetary policies of both countries. Discussion of one without the other leads us to simply go around in a circle.

Conclusion

As an official of the Japanese Government with pressing responsibilities, I stressed the above points at every occasion I had over the past two years. I also stressed that the reason some of the joint ventures have been successful was because the Japanese counterparts showed competence in assuming responsibilities, indicating that a joint venture form may be the best means for American firms to enter into the Japanese market.

I have recently accepted the presidency of a joint venture firm and I am now in a laboratory tube to prove that my argument is correct. I am confident that no matter how small our undertaking may be, by making this venture a success, I can contribute to the eradication of U.S.-Japan economic friction, a large part of which arises from the perception gap.

(End of Series)

CSO: 4120/130

ECONOMIC

FEW U.S. MAKERS TAKE PART IN NTT PROCUREMENT BIDDINGS

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 9

[Text]

More than a year has passed since Japan agreed with the United States in December, 1980 to open procurement of Nippon Telegraph and Telephone Public Corp. equipment to international bidding. NTT has kept its word during this period and, upon President Hisashi Shinto's stern instructions, implemented its three-track procurement procedures, thereby opening up its market more speedily than scheduled.

But the U.S. Government and Congress, frustrated over the country's $15 billion trade deficit with Japan, still complain that NTT's open door policy is not sufficient. Their frustration is illustrated by the proposed amendment to the communications act, pending in Congress, to exclude foreign firms from the U.S. communications equipment market.

The items NTT has opened to international bidding have reached 90 since the agreement with the U.S. took effect. Of these, 81 are categorized for "Track I" which applies to general equipment and are procured through competitive bidding. One item is classified for "Track II" which applies to mainline communications equipment already available in the market and utilized by NTT with some modifications. The remaining eight items are for "Track III" which is applied to key parts of mainline communications equipment and calls for joint research by NTT and private firms for eventual NTT use.

In the "Track I" category, bidding has been completed for 28 items out of the 81 totaling ¥7.4 billion in value, and distributed among 41 firms. Nine foreign firms have won tenders for eight items, including research equipment totaling ¥770 million: they are seven American and one Dutch firms.

So far, 22 firms have applied to participate in bidding for nine items under "Track II" and "Track III" in which only one foreign firm, Motorola Inc. of the U.S., took part in a bidding for automobile telephone equipment. NTT's expectations that more foreign firms will take part in biddings have, up until now, not come true.

Thus, the fact remains that contrary to NTT's expectations, foreign firms do not appear very eager to participate in the biddings. But this does not mean that they are not interested. During the past year, about 240 inquiries have been made to NTT from foreign firms and governments about procurement procedures. But when it comes to actual biddings, there are many cases that foreign firms' general equipment under "Track I" does not meet specifications of NTT.

For example, Hewlett-Packard Co. of the U.S. was very eager to sell its measuring equipment but did not participate in a bidding because the company's product did not match NTT specifications: Hewlett-Packard uses "inch"-unit screws for its products, whereas NTT specifications call for "millimeter"-unit products. On the surface, the difference between "inch" and "millimeter" does not matter much, but it can make a supplier to give up participation in a tender, as actually happened.

Secondly, when it comes to the procurement of mainline communications equipment under "Track II" and "Track III," the international standard becomes a

NTT's Procurement from Foreign Firms

Item	Company name
Magnetic tape for information processing	Sumitomo 3M, Graham Magnetic Inc.
Low pressure CVD	Advanced Semiconductor Materials'
Graphic Design System (1)	CALMA Co.
Graphic Design System (2)	Applicon Inc.
Projection mask allignment system	The Perkin-Elmer Corp.
Computer system	Digital Equipment
Multi directional tomography system	Philips'
Magnetron sputter system	Varian Associates, Inc.

mooted point. NTT procures products which follow closely the standard set up by the Consultative Committee for International Telephone and Telegraph (CCITT), but U.S. firms, like Western Electric, do not care much about such standard. Consequently, products of foreign firms do not get into even procurement biddings.

NTT officials said those U.S. firms are somewhat arrogant in their reasoning that since their products are well accepted in the U.S., NTT should accept them according to U.S. standards. An increasing number of foreign firms have visited the NTT head office in Tokyo to sell their products, but President Shinto told them, "If you like to sell to NTT, you should change your products suited to specifications of NTT. Without such efforts, you just cannot blame us for not opening up our market enough."

On the other hand, a spokesman for NTT said, "The problem of specifications will be resolved with time. But since this is a competitive bidding, we cannot buy products if the prices are too high. That is, when foreign firms cannot win biddings because of their high prices, the problem will be more complicated than before."

NTT is planning to list more products for international biddings and have all their equipment placed under such bidding by December, 1982. But even after their products are open to free competition, NTT will suffer from fresh problems in case foreign firms will fail in one bidding after another because of high prices. Unless the fundamental issue of trade frictions with the U.S. and Europe are solved, the NTT procurement issue will always be vulnerable to attacks from abroad.

CSO: 4120/124

ECONOMIC

MITI STUDIES WAYS TO HELP AILING U.S. AUTO PRODUCER

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 pp 1, 4

[Text]

In compliance with a request made by the U.S. Government, the Ministry of International Trade & Industry has buckled down to study concretely what sort of financial assistance, including financing by the Export-Import Bank of Japan, might be offered as cooperation to help rehabilitate Chrysler Corp., now staggering in a serious business crisis.

The assistance steps being weighed by MITI are said to include the following:

—Opening a way for the Exim bank to extend help to the ailing U.S. automaker through Mitsubishi Motors Corp., which is tied up with Chrysler.

—Inducing Mitsubishi Motors to buy back its shares now held by Chrysler or offering the latter financing with the shares taken as collateral.

—Having Mitsubishi Motors undertake joint production of new models or further step up technical cooperation for restoring Chrysler's competitiveness within the U.S.

MITI hopes that if such steps are realized, this will amount to Japan shouldering the Reagan Administration's additional debt guarantee of the U.S. automaker, and helping Chrysler regaining its feet will serve to prevent a rekindling of the Japan-U.S. trade friction over Japan's auto exports.

MITI's planned help boils down essentially to two points: 1) how to assist the U.S. company financially, and 2) how to increase its competitiveness as to sales in the American auto market.

As to the first point, MITI is considering the possibility of having Exim bank extend financing, such as a bank loan or supplier's credit. Informants said that extension of supplier's credit appeared to be the most promising as it could be applied most readily in the event Mitsubishi Motors exports body and mechanical components to Chrysler.

In such a case, Mitsubishi Motors will shoulder the foreign exchange risk, but the Government can back it up from the fact that it will be able to apply the export insurance system to the financing as it will involve the Exim bank.

Another influential way for aiding Chrysler is regarded to get Mitsubishi Motors to buy back its shares in Chrysler's possession, or 15 per cent of the total, at the prevailing price within a scope of between $100-200 million, or having the Japanese automaker extend relief funds to Chrysler with the stocks as collateral.

MITI feels that having Exim bank and Mitsubishi Motors cooperate in such financing will serve to help Chrysler recover the credibility it has lost from private financial organs within the U.S.

However, as to buying back Chrysler's stocks of Mitsubishi Motors, it needs to be noted that the U.S. automaker turned down such a proposal when it was made by the Japanese auto producer at the end of 1980.

In autumn, last year, there also was a reverse case of Chrysler asking Mitsubishi Motors to buy back its stocks but then quickly retracting its proposal.

As for Mitsubishi Motors, one of its top men said that if the scale of the financial help was small, it would not go very far in promoting Chrysler's rehabilitation, and from such thinking, the company was not inclined actively on its part in such a case to take up the problem.

On the other hand, Mitsubishi Bank, the main bank of the Japanese automaker, said it was obvious that it could not ignore any possibility of Chrysler collapsing and it would be ready to study the problem if asked.

President Tomio Kubo of Mitsubishi Motors said that as a general problem, his company was not against helping the U.S. firm, but that it wished to determine its altitude toward the matter only after receiving a concrete request from Chrysler.

It was possible, as a part of technical cooperation, to consider having Chrysler undertake license production of Mitsubishi Motors' cars, but the priority now was for Chrysler itself to rationalize its production setup and smoothly carry out a cost down, he said.

CSO: 4120/131

ECONOMIC

DOMESTIC AUTO SALES LAST YEAR SHOWED DIP, EXCLUDING MIDGETS

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 7

[Text]

Sales of new automobiles, excluding midget vehicles of less than 550 cc, in Japan last year dropped below the year-earlier level for the second year in a row.

The Japan Automobile Dealers Association said that registrations of new passenger cars, trucks and buses (of more than 1,000 cc) in 1981 fell by 2.6 per cent from a year earlier to 3,897,200 units.

The 1981 registrations broke down into 2,701,156 passenger cars, up 0.8 per cent, 1,173,147 trucks, down 9.7 per cent, and 22,897 buses, down 2.1 per cent.

When midget vehicles are included, sales of new automobiles in the year totaled 5,127,009 units, up 2.2 per cent from 1980.

Domestic Sales of New Autos (excluding midget vehicles) in 1981 by Maker

(Yr-to-yr change in % in parentheses)

Maker	December 1981			Total in 1981
	Passenger car	Truck	Bus	
Toyota Motor	93,625	26,081	289	1,492,699 (— 0.1)
Nissan Motor	60,991	19,496	206	1,134,347 (— 2.8)
Mitsubishi Motors	17,548	8,911	256	327,542 (—10.8)
Toyo Kogyo	21,215	7,499	16	334,274 (— 0.8)
Isuzu Motors	5,439	7,971	230	189,475 (— 2.8)
Honda Motor	26,680	1,790	—	192,646 (+12.7)
Daihatsu Motor	4,845	1,488	—	71,546 (—22.4)
Fuji Heavy Industries	6,502	1,419	—	56,555 (— 7.3)
Hino Motors	—	2,129	116	38,922 (—17.5)
Nissan Diesel Motor	—	1,124	78	20,905 (—18.6)
Suzuki Motor	—	6	—	179 (—52.3)
Imported cars	3,370	—	—	38,110 (—15.1)

CSO: 4120/131

ECONOMIC

FUJITSU TO CARRY OUT LARGE-SCALE CAPITAL INCREASE

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 9

[Text]

Fujitsu, Ltd., Japan's biggest computer manufacturer, is going to carry out a large capital increase on a public subscription basis, with payment set for the latter part of February.

It will involve a total of 80 million shares — 50 million shares domestically and 30 billion shares in the form of European Depository Receipt. Indications are that the money procured will reach nearly ¥60 million.

In considering money procurement by means of capital increase, it stands to become a capital increase ranking next in scale to the ¥99 billion increase by Toyota Motor Co. in July, last year and the ¥81.6 million increase by Toshiba Corp. in September of the same year.

Fujitsu has been briskly building up its facilities, centering on semiconductors, and its export of computers also have started to become conspicuous lately. It is regarded to have decided on a capital increase in considering the need for further strengthening its financial position, such as for competing against International Business Machines Corp.

Fujitsu's coming capital increase will become its third as to procuring funds. The amount of its share issue will outstrip the 70 million by Toyota and rank next to the 200 million share issuance by Toshiba.

As to the capital increase on the European market, it appears that the oil-producing countries will secure a considerable amount of shares through Nikko Securities Co., which will act as lead manager of the capital increase share issuance.

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ECONOMIC

TOYOTA, NISSAN TURN EFFORTS TO BOOSTING SMALL TRUCK EXPORTS

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 11

[Text]

Toyota Motor Co. and Nissan Motor Co. have begun to step up their efforts to export small trucks to the United States in order to make up for the decrease in the export of passenger cars to the country resulting from "voluntary restraint" Japan started last year.

The shift in export of small pickups has begun to take effect as the total export of cars and trucks to the U.S. by Toyota and Nissan began to increase last September and October, exceeding the level of the corresponding month of the previous year.

Due to shipment curtailments adopted by Japanese automakers, the export of Toyota and Nissan to the U.S. had continued to be lower than the previous year's level up to last August

In the case of Nissan, the total number of cars and trucks exported to the U.S. continued to be lower than year-earlier levels between February and August of last year. However, because of a rise in export of small trucks, total export to the U.S. increased to 52,585 units in September last year, up 7.8 per cent over the corresponding month of 1980. This was the first increase in eight months from January of 1981. Furthermore, Nissan's export to the U.S. went up to 52,000 units of cars and trucks in October, a record for that month, or up 33.3 per cent from the corresponding month of the previous year.

Toyota also marked a 3.3 per cent increase in its export to the U.S. last September over the corresponding month of 1980, the first increase in five months, and further augmented the export increase level to 8.8 per cent in October over the corresponding month of 1980.

Japan's exports of small trucks to the U.S. suffered a heavy blow at the end of August, 1980 when the U.S. raised its tariffs on cab chassis of such pickups from 4 per cent to 25 per cent. As a result, sales of Japanese trucks in the U.S. market remained sluggish for the first half of 1981.

Beginning in the middle of last year, however, they turned for the better as higher prices due to increased tarrifs no longer constituted a negative factor and as sales efforts, including incentive payments to dealers, has begun to take effect.

On the basis of these developments, Japanese automakers stepped up their export drive in small trucks to the U.S. in an effort to bring the total for fiscal 1981 to the previous year's 500,000 level.

CSO: 4120/131

ECONOMIC

BRIEFS

AUTO PARTS MISSION TO SPAIN--The Japan Auto Parts Industries Association is scheduled to send a mission to Spain next May to confer with its local counterparts on how to cooperate with each other in the field of automotive parts and components. This will be a follow-up to similar missions so far dispatched to South Korea and Canada to exchange information about parts business trends. In April, 1980, Spanish parts makers sent a fact-finding team to Japan to probe the "secret" of international competitiveness of Japan-built parts. Japanese parts builders hope to have more contact with Spain which is due to join the European Communities in 1985. [Text] [Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 8] [COPYRIGHT: 1982, the Nihon Keizai Shimbun, Inc.]

NONTARIFF BARRIER REDUCTION--Prime Minister Zenko Suzuki wants to reduce or improve the number of non-tariff barriers cited by the U.S. to Japan--51 instances--by over one half. Last week, he made this known at a meeting with the ruling Liberal Democratic Party's three top executives and Masumi Esaki, chairman of the party's special study committee on international economic policy measures. The Prime Minister issued a directive to them that the Government and its party swiftly should work together to draft concrete steps on the following points: Reduce or improve over half of the cited non-tariff barriers; adjust views among the ministries and agencies concerned for reducing the number of items on the residual import restriction list; grant Western enterprises which have entered Japan the same business opportunities and benefits accorded by their governments to Japanese enterprises in their country. In line with Suzuki's instruction, the party's special study committee on international economic policy measures will have a meeting of its chairman and vice-chairman this week to work out a final plan on the matter for presentation to the Prime Minister. [Text] [Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 1] [COPYRIGHT: 1982, the Nihon Keizai Shimbun, Inc.]

TOYOTA AUTO PART IMPORTS--Toyota Motor Co. has announced a plan to procure ¥26 billion worth of automotive parts and components in 1982 from abroad, 18.2 per cent more than an estimated ¥22 billion in 1981. The planned imports for this year will break down into ¥15 billion worth of parts and ¥11 billion worth of supplies and equipment. The estimated imports in 1981, consisting of ¥13 billion worth of parts and ¥9 billion worth of supplies and equipment, represented a 37.5 per cent increase over the comparable imports in 1980. Of the 1981 imports, North American products accounted for ¥12 billion. Besides, Toyota's American subsidiary, Toyota Motor Sales U.S.A., Inc., bought ¥28 billion worth of parts

and components from native suppliers. The ¥28 billion figure does not include the purchases made by Toyota's local dealerships and Toyota Motor Manufacturing U.S.A. engaged in production of truck cargo beds in Long Beach. A Toyota spokesman said that the company's imports and purchases from U.S. producers last year accounted for a considerable share in the annual $300 million amount demanded by the U.S. for Japanese automakers to buy U.S.-made parts and components. [Text] [Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 7] [COPYRIGHT: 1982, the Nihon Keizai Shimbun, Inc.]

IRAQI VEHICLE PURCHASE--Toyota Motor Sales Co. and trader Sumitomo Corp. have won an order from the Iraq Import Corporation to supply 36,000 automobiles in 1982. The vehicles ordered break down into 135,000 1-ton pickup trucks, 6,500 small buses, 4,500 four-wheel drive vehicles, 1,500 2-ton pickup trucks and 10,000 subcompact cars. Iraq suggested in October, 1980 that the country might suspend purchases from Toyota if the company tied up with Ford Motor Co. listed as an anti-Arab enterprise by the Arab nations' Israel-boycotting committee. Toyota's sales talks with Iraq thus were stalled for some time in the first half of last year. But Iraq resumed ordering from Toyota in December to buy 15,000 subcompact cars following the announcement of the company in July that it gave up the joint car-making plan with Ford. Sources took the preceding and latest Iraqi orders as an indication that the moves of Arab nations to boycott Toyota cars have tapered off. Iraq placed orders for automobiles with foreign producers in August and September in usual years, but the prolonged Gulf War forced the country to act slowly this time. [Text] [Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 7] [COPYRIGHT: 1982, the Nihon Keizai Shimbun, Inc.]

CSO: 4120/124

SCIENCE AND TECHNOLOGY

INFORMATION PROCESSING, HITACHI TERMINAL SYSTEM DISCUSSED

Tokyo HITACHI HYORON in Japanese Aug 81 pp 1-4

[Article by Hiroyuki Osako]

[Text] In conjunction with quantitative growth and wider application of information processing systems, the terminal equipment or system has recently undergone various changes. The terminal system, in other words, is assuming an important role in the area of information processing, permeating to every part of institutions.

This paper will discuss these trends along with Hitachi's product development, R&D philosophy and future trends in terms of technologies which support the realization of terminal systems consistent with such trends.

I. Introduction

According to statistics compiled by MITI in FY-80, Japanese production of digital electronic computer systems topped the remarkable 1-trillion-yen mark in FY-79. This is 1,000 times greater than the 1-billion-yen performance of FY-60. Among the increases, the proportion of terminal-related equipment, including communications control systems, grew as much as 25 percent in FY-79, in contrast to 5.5 percent in 1965, when the "online system" was beginning to be commercialized. This indicates a 330-fold production growth in simple comparative terms.

This growth is largely due to liberalization of public telephone circuits and reduction in communications cost through utilization of the DDX (digital data exchange) network; however, the major reason is the harmony between the reduction in total cost of information processing, including communications costs due to the progress in semiconductor and magnetic memory technologies, and the development of software technologies including complex online system controls.

Under these conditions, a significant recent trend in "network architecture" is the polarization between intelligent terminals, which are moving toward all-purpose and more sophisticated models, and terminals designed to exhaust their application by limiting their usage to a certain degree.

In coping with these market trends, Hitachi has developed and marketed terminal equipment with a wide range of applications. In this brief paper, however, I would like to report on the development of products, particularly those in the front line of information processing, and the technological development supporting each of these products.

II. Changes in Market Needs and Data Processing Systems

One characteristic of recent trends in information processing systems, in addition to that of substantiating management control, is a strong demand for the system to function as a tool for upgrading working conditions and for providing full service to customers. Accordingly, we see many cases in which the application, control, and operation of a system are either partially or totally taken out of the hands of specialists and put into the hands of the final users. This tendency is particularly strong in regard to terminal equipment and terminal systems.

This means that the circle of information processing systems has widened in terms of space, quality, and quantity. Here we can see the birth of factors contributing to the realization of such concepts as decentralized processing, network architecture, and codeless information processing.

On the other hand, as seen in the cooperation among banks on matters of savings operations and their coterminal centers and as seen in the establishment of mutual communication "protocols" among chain stores and textile industries, data communications among different industries or plans for promotion of such cooperation is being carried out.

With respect to information processing systems that can deal with these market conditions, I provided details of decentralized processing and network architecture in the May issue of this journal under the title, "Recent Trends in the Decentralized Processing System."[1] Here, I would like to make observations mainly from the standpoint of terminal equipment.

2.1 Meeting the Increase in the Volume of Information

In terms of both space and time, the manner of presenting information handled through terminal equipment located in the vicinity of the source of information has expanded from the conventional coded style to a codeless style; the contents of presentation now include both fixed and nonfixed forms. Examples are information expressed in terms of images, Japanese language, voices and shapes. In comparison with fixed coded forms, such information requires a great deal of data before it can be presented.

In order to process a large amount of data efficiently within the time required, improvement in the speed of transmission can only go so far. Therefore, a method is needed to decentralize the processing as much as possible so that it can be handled locally. For efficient exchange of data between sites, such a system that uses the coded information which has necessary and sufficient data is necessary to recognize the information being exchanged. In order to accomplish this, both large capacity and high performance are required of either the terminal equipment or its control system. This is gradually becoming a possibility within an acceptable price range through the development of various technologies discussed in section III. Examples of this are the various types of terminal equipment for the Japanese document information processing system, the shape processing system, and the document control system.

2.2 Meeting Diversified Operational Needs

The major requirements for the terminal equipment cited above are reduction in cost of the equipment itself and its operation, even greater adaptability to business, and easy handling. In order to meet these requirements, it is indispensable, while maintaining a low price, to diversify input-output methods, strengthen support software, and facilitate operation. More precisely, the following measures can be taken.

In terms of input and operation, in addition to various keyboards and key sets for different usages, the OCR (optical character reading) hand reader and bar-code reader, both of which can directly read data from the source, can be connected, and the system which produces the necessary control codes through a one-touch operation (code key function) can be improved. Also, an input check by means of various displays and an operational guidance function are effective ways to improve the operation of the equipment.

In programming the terminal equipment, adequate and simple language, and conversational programming that requires minimal learning, are effective. Furthermore, program packages are being consolidated for standard operation.

On the other hand, in conjunction with popularization and more sophisticated utilization, increasing the system's overall rate of operation is inevitable. In order to do this, its reliability undoubtedly must be improved and consideration must be given to a backup system in case of breakdowns.

The role of the backup system for terminal equipment is to prevent bringing ordinary business operations to a halt, totally or temporarily, when the system including the backup breaks down. A design that will make this possible requires that it not only be suitable for operation of the entire system within a certain tolerance range but that it also be accomplished at minimal cost.

In this respect, the system design based on the "store and forward" and "delayed online" methods has been rated higher than designs based on conventional methods. The popular decentralized processing system is considered an extension of this concept.

2.3 Consideration for System Environment

In connection with the popularization of data communications among various industries, the use and support of public data communications networks, such as public circuits and DDX are now indispensable elements in terminal equipment. The same applies to data communications within a single industry that has accompanied the expansion of DDX usable areas.

On the other hand, coordination with the software that controls the entire system is critical, for unless various software assets, which require a great amount of development expense and time, are sufficiently utilized, the system cannot become a useful tool. It is believed that software will control the information processing system increasingly in the future, and that its full utilization will lead to increasing the overall adaptability of the terminal equipment.

Also, from the standpoint of making the software structure applicable to the systems environments as much as possible, stratification of the software structure for the terminal equipment is being carried out. This has been greatly influenced by the strata structure system based on the concept called network architecture; however, this is a technology widely used as a means of comprehensively improving the efficiency in the changing, maintenance, and production of software, even for terminal equipment which is not directly subscribing to the software.

In software which is developed on the basis of this concept, the functional definition of each stratum and the specification of the boundaries between strata are, in general, clearly unified. By combining existing modules that comply with the definition and specifications, or newly developed modules if necessary, the software can easily support the system with a wide range of applications.

III. Technologies That Support Terminal Equipment

The basic technologies involved in terminal equipment are: printer, display, keyboard, electronics, data communications, mountings to make the equipment compact and light, handling of paper, and programming. But what is important is not that these basic technologies be used independently in making the equipment, but that they be comprehensively and systematically integrated to produce equipment which can then serve its purpose. For example, the "Automated Machine for Banks (ATM, CD teller window equipment)," introduced in the special issue of this publication, materialized only when these technologies were brought together and the final product designed; it could be manufactured by combining individually existing functional units.

Since the principal basic technologies have already been discussed in the special issue under "Printer Technology," "Display Technology," "Making Terminal Equipment Compact and Light," and "The Handling of Paper in the Printer Terminal," I want to summarize other technologies.

3.1 Use of Microprocessors

To control the operation of terminal equipment at a rate faster than or just as fast as the human senses can react, it is sufficient to use the consecutive control of a microprocessor. For example, in 30 ms, which is said to be the limit of the motion-recognition capacity of humans, a microprocessor with an average command execution time of 2 μs can handle 15×10^3 steps of command. Even if two-thirds of this, or 10×10^3 steps, is used exclusively for performing a program which becomes the overhead for simultaneous movement, it is possible, if the operation moves at an average step number of 1×10^3, to control less than five functions simultaneously.

Also, if higher performance is required, it is possible to install microprocessors specially adapted to each functional unit. Even with this arrangement, the cost ratio of the microprocessor and its accessories to the total equipment is not large, and an allowable cost-performance ratio can be obtained.

On the other hand, specific microprocessors can be selected on the basis of the performances and functions required. For instance, for those which are used as single units and whose functions are relatively simple, such as printers, displays, and keyboards, 4-8 bit microprocessors are often used. For equipment processing compound functions as a result of the combination of single units, 8-16 bit microprocessors can be used selectively, either singly or in multiples, depending on the required function and performance.

In view of the diversified functions of the terminal equipment, the use of microprocessors plays an important role. In conventional equipment, using "hard wired logic," changes in standard functions, the addition of different functions, and changes in performance distribution for various functions would be likely to necessitate modifications in the entire design of the equipment. However, equipment with microprocessor control can accommodate the required functional changes and additions in a relatively short time either through the manufacturer changing the program or through the user's programming.

In addition, we are striving to improve the efficiency of programming. To meet the sophistication in program language, the development of a "cross-compiler" by means of large models is in progress; this will supplement a decline in efficiency deriving from a lack of resources at the time of programming the microprocessor.

3.2 Mechatronics Technology

Mechatronics technology refers to the fusion of mechanical engineering and electronic engineering technologies. This technology owes a great deal to the utilization of microprocessors, as mentioned in section 3.1. Its results are seen clearly in printers, keyboards, various inserters for printers, paper and plastic and transport mechanisms, and in various automatic cash processors for cash and for cash transactions.

This technology applies electronics to a large part of the mechanical controls previously achieved by combining various mechanical functions. This simplifies the complex mechanical parts and the mechanism comprised of these parts. In addition to reducing the manufacturing cost and increasing reliability, this technology provides diverse functions not carried out by conventional terminal equipment.

For example, let us consider the serial printer. A matrix printer with a printing speed of 20 letters per second, TELETYPE® model 37, for instance, was formerly composed of several thousand mechanical parts. As against this, the number of parts used in a "wire dot matrix printer" with a speed of 120-250 letters per second is less than 500 at most. By electronically controlling the X and Y directions of the printing head and the print wires, it is now possible to handle various fonts, including Chinese characters, and print shapes, neither of which could be done by conventional printers. In comparison with previous printers, reliability has improved 20 times and manufacturing cost is down by more than 80 percent.

By using mechatronics technology, similar improvements are being made to products previously based only on mechanical engineering technology. This makes it possible to supply popular terminal equipment models where the installation and maintenance environment are not always good.

3.3 Magnetic Memory Technology

The appearance of 8-inch floppy disk equipment drew a line between conventional terminal equipment and new models, in that it added a filing function to the terminal and made exchange of information more efficient. With this as a turning point, file equipment such as the 5-inch floppy disk and the 5-inch and 8-inch hard disks was developed. This improved the function and performance of the terminal equipment.

The floppy disk can be used widely as an internal filing device, but it also plays an important role as an information exchange medium. For this purpose, it is important that the information be handled by a memory system which has mutual convertibility; however, even though it is technologically possible to increase the memory capacity, the restrictions are great, so we cannot expect much in terms of achieving greater capacity. Rather, it will contribute to popularization of terminal equipment if it can be made smaller and consume less power.

The 8-inch or 5-inch hard disks can be effectively used to make the file device of the terminal faster and smaller and to increase its capacity. At present, the 8-inch disk has a capacity for 10-100M bytes, the 5-inch disk, for 5-20 bytes; the average access time is 30 ms and 80 ms, respectively. But these hard disks are most appropriate for terminal equipment because of their compactness and low power consumption. The power consumption during normal operation is 100 W for the 8-inch disk, 20 W for the 5-inch disk, which is one-fifth to one-twentieth of the consumption than that of the conventional 14-inch disk. The lower power consumption was made possible by minimizing the friction created when a disk rotates and by improvements in high density memory technology which provide needed memory capacity and at the same time permit the reduction of the radius of the disk.

To obtain greater capacity while maintaining the compact size, the disk equipment is so structured that the disk surface itself is fixed to the rotating axis of the equipment. When operating a terminal with file equipment, it is important to consider a backup system to cover damage and file breakdowns caused by operational error. For smaller capacity equipment, a floppy disk is more desirable; however, it is insufficient as a backup system for a file whose capacity exceeds tens of megabytes. A floppy disk with 1 M byte requires tens of sheets, and the problem is the time required for backup operations rather than capacity. For this purpose, an open reel-type magnetic tape device was used in the past; however, its load is too great for the terminal equipment. Because of this, recently a magnetic cartridge has been attracting attention. This device, although there still remains the problem of convertibility with conventional systems, is compact and is expected to achieve a memory capacity of 10-40 M bytes.

The magnetic bubble, which is theoretically different from the conventional magnetic memory system, has advantages in terms of resistance to adverse environment, particularly changes in temperature, a problem common to disk and tape equipment. The magnetic bubble tolerates temperatures from -10 to 70°C. But at present there are problems of capacity and cost, so it will take 2 to 3 years before it can be realized.

3.4 Other Technologies

In connection with the above-mentioned utilization of microprocessors, the semiconductor technology for memory, LSI, and VLSI is important for terminal equipment. In particular, a move toward higher integration of the memory system is likely to become a factor in radically changing the economical distribution of functions of the equipment. For example, in the Chinese character font, which is expressed by 24 x 24 bits, the character generator, which generates approximately 8,000 characters of JIS's No 2 standard, requires a memory of about 5 M bits. To install this in a printer is impossible in terms of size and cost. Therefore, it is more practical to consider it in common use with other equipment, install it within the file of the control mechanism, and design it so that the portions necessary for operation can be extracted onto the main memory device. But in the near future, when it is expected that a mask-type read only memory of 128 kilobits or 256 kilobits per chip will be developed, this character generator will appear with a 36-chip or 18-chip LSI, so that it can be built into the printer. This will contribute greatly to the performance of small-scale Chinese character systems.

In conjunction with the popularization of mechatronics technology, the role of the power semiconductor must not be neglected. In this area, it will be possible to use highly integrated units as a result of utilization of power MOS (metal oxide semiconductor)-type FET (electric field efficiency transistor), which has good control efficiency.

Various input devices are needed for the terminal equipment. The operation of most conventional keyboards has switched from a mechanically driven system to electronics. In addition, new technologies such as keyset and CRT (cathode ray tube) touch-keys along with image sensor based image input, voice recognition, voice synthesizing, and voice output are being utilized in codeless devices.

IV. Development of Terminal System

The development of Hitachi's terminal system has been in the area of all-purpose terminals, specialized terminals for specific purposes, and custom-made terminals. For these terminals, Hitachi has been developing and strengthening a number of new products in the past 1-2 years: these include the HITAC T-560/20 video data system; HITAC L-320/30H and 50H terminal computers; the HITAC T-550/30 decentralized OCR; HITAC T-5862, T-5866, T-5869 automatic cash transaction systems; and the HITAC T-580/10 parking terminal system.

In addition, responding to the market trends and needs as mentioned in section II, Hitachi has developed new terminals by applying technologies discussed in section III. The basic developmental concepts of these terminals are as follows:

1) Data processing in the vicinity of data source.
2) The ability to make inputs with least amount of change in the original form of data.
3) Easy operation even for nonspecialists.
4) Minimizing space, cost, and other factors in installing the terminal.

5) Maintaining maximum convertibility with different terminals so as to allow for maneuverability with future products or mixed operations with different terminals.
6) Maintaining interchangeable character sets and a code system for them.

The development of new terminal equipment in each of these areas of application is as follows.

4.1 Chinese Characters and Japanese Language Processing Terminal

For terminals which can be used exclusively for processing information in the Japanese language, the following have been developed.

1) HT-5217 Chinese Character Printer Terminal. This is a terminal for processing conversation, with English, numeral, and kana, the Japanese syllabary, inputs, and Chinese character output; the output device is a thermal printer.

2) BW-20 Japanese Word Processor. This has diverse input methods which can meet a wide range of demands; the output devices can be selected for various purposes, from matrix printing type to dot matrix type.

In addition, in order to support the function of Japanese language processing for all-purpose terminal equipment, share-load type and stand-alone type systems[2] are available for the HITAC T-560/20 and the HITAC L-320/30H and 50H respectively. Since they can be used as they are for various functions of an all-purpose terminal, they can be applied to establish comprehensive office automation in the future.

4.2 Shape Processing Terminal

As a full-scale shape processing system, the HITAC G-710 and HITAC G-730[3] are available; furthermore, a shape processing function suitable for office processing has been added to the HITAC T-560/20. This function is reinforced when backed by a printer which provides color displays and hard copies.

4.3 Terminals for Banking Institutions

As a general teller device the HT-5821 and HT-5822 have been backed up by Chinese character processing. The HT-5825 teller window device has been developed by retaining the functions of these models but reducing the size so that it can be used on the teller's desk. A "teller's cashier," which handles all currencies and types can be connected to this equipment as well.

In the area of automated equipment, HT-5862 automatic cash payment and HT-5866 and HT-5869 automatic transaction equipment have been developed to meet a wide range of needs. These items of equipment are installed with new mechanisms, including "guidance" by CRT display and "offline" processing by a built-in floppy disk. In addition, consideration has been given to adjustments in terms of installation, operation, and interphase, so that these items of equipment can provide a unified system for all cash transactions.

4.4 All-Purpose Terminal Equipment

For all-purpose terminal equipment, regarding which the main objectives are low price and popularization, the following products are available.

1) HT-5101 Telephone Terminal. This is a multipurpose terminal for public circuits whose data entry is diversified and which can be used as easily as a telephone.

2) HT-5455 Display Terminal. This is a CRT display terminal whose functions and interphase are equivalent to those of the TELETYPE®, which is used extensively for TSS (time sharing system) and other conversation-processing systems and minicomputers.

These terminals are available not only as standard equipment but they can also become a developmental base for individualized terminals for different businesses.

In addition, custom-made systems, using the resources developed in conjunction with all-purpose systems such as the HITAC L-320/30H and T-560/20, are used in various areas; they are highly rated for their operational convertibility and for their development within a short period of time.

V. Future Terminal Systems

Terminal systems are becoming popular and are being used in many areas; there are, however, many problems to be solved and new technologies to be developed in the future. Some of these are:

1) Popularization of high-speed data transmission network using optical fiber.
2) Recognition and accumulation of image information.
3) Efficient processing of codeless information.
4) Making the system compact, lightweight, and highly reliable.

But more important than these problems as a future issue is the matter of security control. As the utilization of information processing systems expands, precautions must be taken against crime and secrecy must be maintained. The demand will naturally arise for the addition of a function which can recognize lawful operators from unlawful ones. In addition, the popularization of decentralized data processing will bring about decentralization of the files in the vicinity of the terminal equipment or its control system. The majority of the security work in connection with a terminal system is related to these decentralized files. A great deal will depend on developments in software rather than hardware.

Furthermore, in order to achieve even greater popularization, it is necessary to develop portable high-performance terminal equipment. For this purpose, in addition to compactness, light weight, and low power consumption, it is important to make software into firmware.

On the other hand, in terms of utilization of terminal equipment, the trend will still be toward polarization between all-purpose and specialized systems.

From the standpoint of the former, realization of a multifunctional terminal must be worked out. This does not mean providing what is essentially single-function equipment with many applications, as in the case of conventional keyboard displays and keyboard printers; it means connecting the terminal with equipment with individualized functions such as OCR, various wand reader [phonetic] and keysets, and providing the appropriate software for various needs.

For example, the terminal OCR must be provided with functions in addition to those available to conventional OCR, such as OCR with keyboard data entry, inquiry, and remote batch processing, and numerous other functions required when the terminal is seen abstractly as a data input system, or functions that may emerge from this.

In supplying these functions, it is desirable to have the system perform as concurrently as possible those functions which can be realized by using resources which do not interfere with one another during simultaneous operations.

Also, in the area of specialized terminals, it is believed that the popularization of the "full-turn key system" which most meets the user's demand will be promoted even more. This trend will aid in establishing a bulk sales market, supported as it is by a preference for cooperation among industries, as represented by the trend mentioned above of establishment of "protocols" common to different industries. A terminal system suitable for this would be a packaged product in which the advantages of both hardware and software have been incorporated to the maximum.

It would seem inevitable to promote a system design based on special terminologies and customs which are used in business daily, and to provide products by which mechanization will spread smoothly.

VI. Conclusion

I have approached the topic under discussion on the basis of existing products, those being developed, and existing and future technologies.

On this and eight other articles in this special issue, I would appreciate it if the reader would provide us with critique and guidance concerning Hitachi's product development discussed above.

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SCIENCE AND TECHNOLOGY

NEC'S VICE PRESIDENT DISCUSSES HOW TO LESSEN SEMICONDUCTOR TRADE FRICTIONS

Tokyo JAPAN ECONOMIC JOURNAL in English Vo 19, No 984, 8 Dec 81 pp 20, 15

[Text] **Nihon Keizai Shimbun:** *What is your outlook for technological competition between Japan and the United States?*

Ouchi: We may be ahead of the Americans in mass production technologies of integrated circuits. The Americans, however, are by no means laggard in high technologies as a whole. We feared that Japanese makers' announcement that they were going to mass produce 64-kilobit random access memory (RAM) chips, the first-generation of very large-scale integrated circuits (VLSIs), would unduly provoke the Americans. We heaved a sigh of relief when we found that there is no great technological differences in this field between Japanese makers and their U.S. counterparts.

The strong superiority of Japan's mass production technologies primarily comes from the fact that Japanese semiconductor makers placed extra emphasis on automatization of their own domestic plants, while their Western counterparts depended on Asian labor for assembly work. The use of automatic assembly machines not only gives extra quality and reliability to the end products but also helps reduce production costs by minimizing bad products.

Complacency on our part, however, is totally unwarranted. The yield rate (the rate of "good products" against the total) is rapidly improving in the United States. If we remain smug about the victory of Pearl Harbor, we may as yet face another tragedy of Midway.

The final outcome of the "LSI war" will not become clear until about 1986 when the bona fide VLSIs—256-kilobit RAMs — made their debut. IBM is plaughing back some ¥300 billion R&D funds per annum into VLSIs and other high technology fields.

NKS: *How will the price war between Japan and the United States fare?*

Ouchi: The price of a 64K RAM, which stood at about $100 at the time of experimental delivery a year ago, has now come down to only about $10 and is bound to decline further. Price competition in the U.S. market is certain to intensify. The definite disadvantage for us in the fierce price war is the existence of the U.S. trade law. According to the law, Japanese makers have to sell their products in the U.S. market at the prices which prevailed in the Japanese market two month previously. The rationale is that U.S. distributors will carry two months' inventories. The trouble is that we cannot sell our products at two-month-old prices and still remain in competition LSIs are products whose prices can come down 10-fold in a matter of a single year. If we reduce our prices, however, we are liable to risk dumping charges and have our shipments stopped. We, therefore, have occasions to control our exports to the U.S. market.

NKS: *Which do you think has a greater competitive edge in patented technologies — Japan or the United States?*

Ouchi: Although Japan and the United States are just about equally matched in technological standards, Japan is paying more in patent royalties. Our own company is mostly trading technologies with U.S. firms on a mutual exchange basis. Some U.S. patents, however, have been acquired by petroleum companies, and we naturally cannot obtain such patents on a cross-licensing basis. We have to pay cash for such patents and our payment excess in the patent field will continue for some time.

Technological development is breathtakingly swift in the field of semiconductors. Our own company is investing some ¥40 billion in new equipment in the current fiscal year. Equipments are as good as new after three years of use. We have to scrap them, however, or we will lose out to our competitors.

We, therefore, try to recover the invested amount in the first two years, turn a profit in the third year and use the profit for re-investment in newer facilities. To use a metaphor, we are a runner in an endless marathon race.

NKS: *Aren't U.S. manufacturers having chest pains in their ruthless marathon race with their Japanese rivals?*

Ouchi: Independent U.S. semiconductor makers having only several hundred workers on their payrolls are beginning to have management troubles, it is true, and they are putting themselves up for sale. Our own company has purchased Electronic Arrays Inc., a specialist semiconductor manufacturer in the Silicon Valley, while Siemens of West Germany has acquired another semiconductor maker, Advanced Micro Devices, Inc. Philips of the Netherlands, on the other hand, has bought into Signetics, while Schlumberger, an oil prospecting company of France, has purchased Fairchild.

NKS: *The Americans are criticizing as unfair Government subsidies and research unions etc. Japanese manufacturers are enjoying...*

Ouchi: There are moves in the United States for the Federal Government to guarantee loans to semiconductor manufacturers — a welcome development. European governments are already providing subsidies to LSI makers following Japan's example. In the United States, the Department of Defense is extending a helping hand in development of very high-speed ICs, called VHSI.

What we fear most is the rise of protectionism in the United States. We are strongly opposed to the protectionist belief among the Americans that the United States should have absolute superiority in the field of ICs and computers etc. from the national security point of view. It must be pointed out clearly here that there is a considerable difference between production for the military and that for the civilian use. Makers of military products are liable to take their contracts for granted. If makers of civilian products allow themselves such a luxurious illusion and take it easy, they will immediately lose their clients. If U.S. makers, which have long depended on military production, really want to make themselves stronger, they should try to shed their protectionist armor.

NKS: *The Americans are claiming that Japanese semiconductor makers are shutting out U.S. products as they are concurrently engaged in production of computers...*

Ouchi: The claim is simply unfounded. As there are many thousands of ICs with different properties, it is simply uneconomical to engage in production of all of them. American manufacturers boast of unrivalled competitive edge in many ICs. I believe that Texas Instruments Japan Ltd., a wholly-owned subsidiary of Texas Instruments Inc., know much more about our company's computer sales than our company's semiconductor division.

NKS: *Do you think that Japan and the United States will be able to eliminate trade frictions?*

Ouchi: I think that establishment of manufacturing plants in each other's markets will go a long way to tone down frictions. The trouble is that we cannot simply establish our plants just anywhere. For production of such sophisticated commodities as semiconductors, we need a pretty high industrial basis. If we cannot buy special gases and chemical etc. nearby, we won't be able to build truly integrated semiconductor plants. This is the reason we have to limit our plant establishment in specified areas in advanced countries. We are now actively advancing into the United States and European countries, while such U.S. companies as Texas Instruments and Motorola are now rapidly bolstering their manufacturing bases in Japan. If such mutual entries in each other's country increase, it will greatly help reduce trade frictions, as no one can pin down the blame on any single party.

NKS: *Will technological transfer thrive?*

Ouchi: Some say that establishment of wholly-owned plants will not promote technological transfer. I do not agree with this opinion. Technological transfer can be greatly speeded up by plant entries. When we bought at American company, we invited some of the company's engineers to Japan and trained them at our Kyushu plant. Several of the Americans since were taken over by other U.S. companies as quality control experts. We are now planning to establish a plant in Scotland and recruit hundreds of engineers in the host country. Some of such local engineers are certain to move to other companies after working with us for a while. Such movements will greatly promote technological transfer in host countries.

Joint ventures simply will not work in the field of high technologies. As technological development is exceptionally brisk in the field, even slight delays in decision-making in equipment investments etc. will lead to disastrous end. For such quick decision, we have to be independent when we go to other countries and establish manufacturing plants. Some of the technicians we recruit and train there are certain to move on to other countries,

promoting technological transfer. We may suffer a bit from such development, it is true, but not much as we are certain to develop new technologies and commodities on our own. The source of all evils is to try to adamantly protect one's own technologies.

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SCIENCE AND TECHNOLOGY

ORGANIZATION OF DAIKYO OIL COMPANY VIEWED

Tokyo NIHON KEIZAI in Japanese 21 Dec 81 p 8

[Text] "Suspend, at any rate, the manufacturing of steel plates for crude oil tanks." This was the directive given the procurement department by President Yoshiro Nakayama (67) at the beginning of June, this year. The project for the construction of a crude oil depot with a capacity of 800,000 kiloliters in a zone contiguous to the Yokkaichi Oil Refinery had already been started, with a ceremony of purifying the building site held in April. Just after the end of the consecutive holidays in May, however, shipments of products fell to an abnormally low level. Also, the yen rate on the foreign exchange market was falling at an increasing tempo. So, it was necessary for the company to study, for some time, whether it should continue this project as scheduled.

Liaison Conference of Executives Is Theater for Free Discussion

The liaison conference of executives, which conference is held on the morning of every Tuesday, became a theater of fierce controversies for some time thereafter. The subjects of controversies were such as whether the present decline in demand is only temporary and what prospect it is possible to establish for the demand for crude oil tanks in the country as a whole in the future. In the meantime, the downward trend of the yen rate made unexpected progress, to reach the level of ¥230 to $1 in the end. Crude oil prices, which must be paid in yen, rose drastically and the deficit in the company's account swelled rapidly.

"All plans for the construction of depots should be frozen, with the exception of liquefied petroleum gas (LPG) tanks." This was the final decision made by President Nakayama in early August, after deliberations at the meeting of executive directors (held in the afternoon of every Tuesday). Although resistance was offered by those concerned with the work of construction in the field, it was dangerous for the company to invest a sum of ¥70 billion in total in construction projects under the circumstances prevailing at that time. Fortunately, the manufacturing of steel plates for tanks had been suspended just before entering the process of rolling. So, it was necessary for the company to pay only several hundred million yen to the construction enterprises concerned in compensation for the freezing of the construction projects.

The president does not attend the liaison conference of executives, so that "the participants can speak as they like" (President Nakayama). This conference, which is presided over by Vice President Hiroto Sumiyoshi (59), is a theater

for the exchange of information concerning the details of everyday business and discussions on various problems including the strategy of the company.

On the morning of every Thursday, a "tea party" is held with the participation of Chairman Hirotaka Mitsuda (74), President Nakayama, Vice President Sumiyoshi and Managing Director Satoshi Kobayashi (60), who has jurisdiction over the technological field. This party, too, does not take up any specific problems for discussion. It can be seen, therefore, that free discussions are held at two different stages, to provide a "lubricant" for this company.

However, the dominant view is that it is President Nakayama who is the most effective "lubricant" for the company. President Nakayama is a man of open-hearted character, as can be seen from the representative view that he is a man who "can hold heart-to-heart talks with everybody" (Chairman Mitsuda). Because of such a character, both those within the company and outsiders are favorably disposed toward him.

He has an established reputation as a man who controls his special agents most firmly in oil industry circles. Within the Petroleum Association of Japan, too, he has become an important candidate for the chairmanship on every occasion of change of the chairman, because his ability as mediator is appreciated within this organization whose members harbor "different speculations." Also, Chairman Mitsuda turned over the post of president, in which he had served for a little more than 15 years, to Nakayama, because he placed expectation on such an ability of Nakayama.

The four members of the "tea party" are assisted by eight executive directors. There is the impression that this company has too many executive directors for its scale. The reason is that President Nakayama decided to "clarify the location of responsibility in every department."

With Executive Director Keizo Suemasa (60), who is in charge of planning, at the top, the company has such executive directors as Shigeo Homma (62) who is director of the Yokkaichi Oil Refinery, Koichi Tsutsumishita (56) who is in charge of supply and transportation, Takaaki Makino (58) who is in charge of procurement, calculation control and environmental problems, Katsuji Saito (54) who is in charge of crude oil and youngest of all executive directors, Hiroshi Harayama (55) who is in charge of general and personnel affairs, Shota Kikuchi (58) who has the exclusive jurisdiction over the field of business, and Hisashi Tanaka (59) who is in charge of accounting.

Exchange Between Groups of Part-Time Executives

The executive staff is characterized by the existence of six part-time directors. In late June this year, Daikyo Oil offered the post of part-time director to four executives of Asia Oil (head office: Tokyo; President: Ryutaro Hasegawa; capital: ¥7,506 million), including President Hasegawa (72). An exchange of personnel took place between the two because Daikyo Oil established its control over Asia Oil by its acquisition of 48.7 percent of the total shares of this oil company.

Daikyo Oil sent to Asia Oil, Takashige Kitsuda (60) (now a part-time director), who was the senior executive director at that time and who had a reputation as a top theorist within the company, and Tatsuji Takanashi (53) (now a part-time director) who was the director in charge of technology. These two executives of Daikyo Oil took the post of managing director and that of director, respectively, in Asia Oil. At the same time, five executives of Daikyo Oil--Mitsuda, Nakayama Sumiyoshi, Tsutsumishita, and Kikuchi--became part-time directors of Asia Oil. Especially, Kitsuda took charge of demand and supply (production plans and distribution of products), which can be regarded as a key department for any oil company, to serve as a bridge between the two oil companies.

It may be unnatural, in the light of the logic of capital, that an exchange of executive personnel is carried out, on a nearly equal footing, between two companies, one of which is virtually in control of the management of the other. This step was taken, however, from the standpoint that "the two companies should unite together, as early as possible, to form a group in the true meaning of the word, instead of making use of their own strength" (President Nakayama). About 6 months have passed since the exchange of executive personnel was started, and this exchange has begun to produce such an effect as follows: "The special quality of the business information from Daikyo Oil, which is the seller of crude oil, and that of the technological information from Asia Oil, which is a refining enterprise, have begun to be connected together" (Vice President Sumiyoshi).

The biggest purpose of Daikyo Oil's acquisition of 48.7 percent of the total shares of Asia Oil at the request of Mitsubishi Chemical Industries was to improve the efficiency of the refining department. Daikyo Oil has only one oil refinery (Yokkaichi), but Asia Oil has three (Hakodate, Yokohama, and Sakaide), including those of its subsidiaries. Moreover, Asia Oil has facilities to handle crude oil of inferior quality, including the apparatus for direct desulfurization, while the Yokkaichi Oil Refinery handles mainly gasoline and other kinds of light crude oil. Besides, it was attractive for Daikyo Oil that Asia Oil maintained a long-term crude oil supply contract with Mobil Oil.

It is difficult for any one oil refinery to improve its production efficiency independently beyond a certain limit. Also, the weight of heavy oil in Japan's crude oil imports has been increasing, year by year. The first purpose of Daikyo Oil's acquisition of Asia Oil shares was to break such a stalemate.

With the transfer of shares, Asia Oil deserted the group led by Kyodo Oil. In late September this year, however, Asia Oil concluded with Kyodo Oil a contract, whereby "the delivery of products will continue as before for 5 years to come." Daikyo Oil, too, emphasizes that "We do not intend to increase our market share unnecessarily" (President Nakayama).

The market share of Daikyo Oil is 5.7 percent (recorded in 1980), but the share of the Daikyo group in regard to refining capacity is 8.25 percent. So, the so-called reverse refining-sales gap is about 2.5 points. Daikyo Oil, therefore, will be burdened with excessive facilities for a long time to come, even if it makes effective efforts for the combined operation of crude oil tankers and the proper distribution of refining work.

Even under the 3-year management plan (1982 through 1984) which is in the making at present, "It must be expected that demand will remain rather stationary throughout the 3 years" (Executive Director Suemasa). Excessive competition for the expansion of sales will only increase the blow already dealt this company by the losses amounting to ¥28.8 billion, which losses were recorded on the occasion of the interim settlement of accounts as of the end of September.

Sumiyoshi Is Likely To Take Next Presidency

If we want to foresee the future of the Daikyo group, we must keep watch on the Japan Industrial Bank, which is the major bank connected with Daikyo Oil. At one time, Daikyo Oil had three executives hailing from this bank. At present, however, only Chairman Mitsuda and Vice President Sumiyoshi are the executives who came from this bank. The Industrial Bank played a leading role in Daikyo Oil's acquisition of Asia Oil shares. It also served as an intermediary in the establishment of business tie-up between Daikyo Oil and Fuji Kosan, which tie-up has produced such effects as unification of asphalt sales departments since 1979.

These past circumstances provide an important foundation for the prevailing view that Daikyo Oil is the eye of the moves for the reorganization of oil industry circles. At this time when the necessity of reorganization of oil industry circles is advocated, not a few people think that it is a matter of time that the Industrial Bank and Daikyo Oil will take a new step to strengthen the Daikyo group. With consideration for such a possibility, it is proper to think that the next presidency will go to Sumiyoshi.

Conditions for Being President

President Yoshiro Nakayama says as follows: "An ordinary person is desirable for the post of president. It is very good to have a president who belongs to the elite. However, a person with strong elite consciousness is not acceptable. It is important for the president to join the members of his company and walk together with them. The post of president is not an honor at all. It is a trying post. This post must be buttressed by the trust of the members of the company in their president. There is no reason to think that the president can win the trust of the members of his company, without assimilation with their feeling.

"Nevertheless, the primary mission of the president is to display leadership. I think that it is most desirable for the president to make decisions, on the basis of future prospects and the present situation combined together at such a ratio as seven to three. Any person, who is induced to make immediate gains, must be qualified as president. Especially in oil industry circles, where the circumstances concerning crude oil and foreign exchange are changing too rapidly, it is most terrible to lose sight of the general situation."

Daikyo Oil

Number of Executives: 25 (including two auditors).

Average Age of Executives: 3 are graduates of Tokyo University; 2--Tokyo Institute of Technology; 2--Hitotsubashi University; 3--other national universities; 3--Waseda University; 4--other private universities; 4--higher technological and commercial schools; and 4--other schools.

Terms of Office Held by Presidents: Eiji Saito--3 years and 3 months; Masao Takahashi--17 years and 1 month; Hirotaka Mitsuda--15 years and 7 months; and Yoshiro Nakayama--from August, 1975 to the present.

Remuneration for Executives: Regular payments--¥228 million, and bonuses--¥30 million.

Annual Income for President: ¥35,040,000 (according to his final income tax return for 1980).

CSO: 4106/38

SCIENCE AND TECHNOLOGY

COAL IMPORTS FROM SOVIET UNION DELAYED

Tokyo YOMIURI SHIMBUN in Japanese 25 Dec 81 p 9

[Text] It became certain on the 24th that coking coal exports from the Soviet Union to Japan for the current fiscal year will be far below the annual tonnage of the 1 million tons which the Soviet Union guarantees. This is because the coal received from April through November was 545,000 tons, which tonnage is only half of the target quantity. Consequently, a Japanese steel industry source says that "We cannot expect additional receipt, henceforth, either." The Soviet Union has promised to export "1 million tons" as collateral for the bank loan provided by Japan in connection with the development of South Yakut coal mines. Because the matter is incorporated in the Government-to-Government agreement between Japan and the Soviet Union, it seems that this sharp decrease will leave problems in the future.

It is viewed that the sudden decrease in the shipment of Soviet coal to Japan has been affected by the fact that the Soviet production of coal has not necessarily been smooth and that the annual supply of 10 million tons of Polish coal to be shipped to the Soviet Union has almost stopped due to the unstable political situation in Poland.

Soviet coal exports to Japan increased approximately to 2.5 million tons per year during the peak period of 5 or 6 years ago. However, exports have been on the gradual decrease since then. Nevertheless, 1.74 million tons and 1.85 million tons of coal were exported to Japan during fiscal 1979 and fiscal 1980, respectively. Thus, the Soviet Union maintained a fairly good level, being a strong supplier after the United States, Australia and Canada.

However, the situation completely changed during the current fiscal year, as Soviet coal exports to Japan sharply dropped. Negotiations for the current fiscal year on Soviet coal exports to Japan between the steel industry and the Soviet Union were delayed more greatly than usual. They reached an agreement finally in early September. The contents of the agreement are that (1) Shipments from April through December will be from 700,000 tons to 750,000 tons (including quantities carried forward from the previous year), and (2) consultations will be held once again as to shipments from January through March, next year. Thus, the Soviet Union was to strive for the aim of reaching the 1-million-ton level, anyway.

The fact that there are no prospects for January-March shipments, next year, blocks the attainment of the 1 million tons. Consequently, a person in the

steel industry in charge of coking coal foresees that "1-million tons is hopeless. We wonder if the tonnage will be substantially below that." The Soviet side has recently made representations, saying "If we end up not attaining the target, we want to move the target forward beyond April, next year. Thus, the Polish situation is affecting Japan in the form of a decrease in the shipment of Soviet coal to Japan.

As Japan imports approximately 70 million tons of coking coal, the decrease in Soviet coal imports does not directly affect Japan's iron and steel production. Because of the sluggish economies at home and abroad, the production of iron and steel is falling. As a result, there tends to be leftover coking coal. However, it means the Soviet side's "breaking its promise" that coking coal, which is collateral for the repayment of the loan on the development of Yakut coal mines, is not supplied smoothly. Consequently, measures to be taken by Japan are to be noted.

CSO: 4106/38

SCIENCE AND TECHNOLOGY

FINANCE MINISTER, MITI DISCUSS RELIEF OF ALUMINUM INDUSTRY

Tokyo ASAHI SHIMBUN in Japanese 25 Dec 81 p 9

[Text] According to what was clarified by a source concerned on the 24th, how to spend the balance (about ¥4,800 million, including the interest of some ¥500 million) of the funds for disposing of excessive facilities, which funds had been pooled through the ingot tariff allocation system for fiscal 1978 and 1979, for the relief of the aluminum-refining industry, was decided upon through consultations between the Finance Ministry and MITI.

This breaks down into the following: (1) About ¥1 billion for the latter half of fiscal 1980, as scheduled, as partial aid in expenses for disposal, and about ¥2 billion for fiscal 1981, by extending the time for granting by 1 year, in regard to the facilities which were discarded or frozen when the annual facilities capacity was reduced from 1.64 million tons to 1 million ton throughout the industry circles; (2) about ¥500 million, which is equivalent to the interest, will be spent for research and development in industry circles of a refining method under which much electric power is not used, including the blast furnace method; and (3) the remaining funds, amounting to some ¥1,300 million, will be returned to the Treasury.

Under the tariff allocation system in the past, unlike the tariff exemption system which is to be carried out for 3 years from fiscal 1982, the tariff rate of 9 percent was reduced to 5.5 percent in fiscal 1978 and to 4.5 percent in fiscal 1979, with the necessary volume of imports as an object. At the same time, an amount with an equivalent of 0.25 percent deducted, in the amount of reduction of the tariff burden, was contributed by ingot importers, and it was distributed among various refiners who were to dispose of excessive facilities, through the Aluminum Industry Structural Improvement Promotion Association. The contributions in fiscal 1978 and 1979 amounted to a total of some ¥8,100 million, and of this, about ¥3,800 million has already been granted.

CSO: 4106/38

SCIENCE AND TECHNOLOGY

TOYOTA PRESIDENT DISCUSSES COMPANY'S PLANS

Tokyo NIHON KEIZAI in Japanese 28 Dec 81 p 8

[Text] President Shoichiro Toyoda (56) said that "The decision was made without heated discussions," looking back on the moment when the production and sales plans for next year (January through December) were decided upon. In recent years, fierce controversies took place over such a kind of plans between leaders of Toyota Motors and Toyota Motor Sales. However, the joint conference of the two companies, which conference was held on 1 December for discussion on policies, seems to have been peaceful.

Strong Inclination Toward Passenger Cars Will Be Corrected

Toyoda says as follows: "Toyota Motor Sales and Toyota Motors draw up business forecasts for next year, with the Planning and Research Department and the Research Section, respectively, in charge. On the basis of such forecasts, they establish prospects for demand in the future. There was not a wide gap between the prospects established by the two companies on the secretarial level."

Toyota Motors tends to establish a relatively high goal, because it aims at increasing profits by reducing the production cost by means of mass production. On the other hand, Toyota Motor Sales is inclined to take a cautious attitude, with consideration for such problems as the profits to be gained by dealers. A conflict of opinions between the two companies gives rise to strained relations in the favorable sense of the words. To outsiders, however, the two companies sometimes appeared to be in discord with each other.

When Toyoda was transferred from the post of vice president of Toyota Motors to that of president of Toyota Motor Sales in June this year, it was said that this transfer is a step for the unification of the two companies. It may be said that this step has begun to produce the expected results. The sales plan expects that exports will remain at the level of 1.73 million, or about the same as that in the present year, but that sales on the home market will amount to 1.65 million, or 10 percent more than the estimated sales in the present year. This expectation is to be realized only "When the market environment is favorable." Toyota Motor Sales, however, seems to be rather confident of success in attaining this goal.

When Toyoda became president, he announced that his basic policy is to establish a structure for the sale of 2 million cars at home, as well as to turn out attractive commodities and push overseas strategy in a positive way. The goal of 2 million cars had been established earlier, but it had not been clear when this goal should be attained. Toyota Motor Sales has now decided upon a target year, with the establishment of a "prospect for the attainment of the goal in 1985." From next year, therefore, it must expand sales by stages. Such circumstances, too, are behind the bullish sales plan.

President Toyoda says as follows: "The attainment of the goal of 2 million cars depends partly on the trends of the market. Yet it is difficult to attain this goal without securing a market share of 40 percent or more. Especially, we must increase in some way or other truck sales which are decreasing slowly. Until now, Toyota has been strongly inclined to concentrate on passenger cars. It is necessary for us to prepare many specially-equipped cars, to increase demand for trucks in every field." This is one of the conclusions he reached after he traveled throughout the country, almost ceaselessly, following his assumption of the presidency, to listen to the opinions of the dealers affiliated with his company. As a matter of fact, Toyota Motor Sales created a truck division in October this year, to establish a new structure for the expansion of truck sales.

It goes without saying that these measures are decided upon not by the president alone but by a conference of top leaders. The problems straddling both of the companies, such as the formulation of annual production and sales plans, are taken up and settled at a joint conference of the two companies. The participants in the joint conference are limited to the executives in the post of managing director and above. At present, there are nine participants from Toyota Motors and five from Toyota Motor Sales (managing director Isao Makino, 59, is excluded, because he is in the United States as president of U.S. Toyota). The joint conference is held once a month, usually at the head office of Toyota Motors in Toyota City, Aichi Prefecture.

For the solution of the problems related to Toyota Motor Sales alone, a management conference, in which full-time executives take part, and a conference of directors including dummy directors, are held, each once a month. It is the conference of managing directors which is attached with importance as an organ to make speedy decisions.

This conference is held as occasion calls, with Chairman Seishi Kato (74), President Toyoda, vice presidents Susumu Otake (65) and Shinichi Kanda (66) and Managing Director Kozo Minowa (59) as participants. In the case of Toyota Motor Sales, those engaged in sales at home are mostly working at the head office in Nagoya, and those in charge of exports are working at the Tokyo branch. The top executives are constantly going back and forth between Nagoya and Tokyo. The conference of managing directors is held at a place, where both the chairman and the president are present. This conference is not an organ to make formal decisions. The basic direction to be followed by the company, however, is determined at this conference.

President Toyoda Is "Good Listener"

President Toyoda had been serving in the technological field of Toyota Motors for a long time before he came to the post of president of Toyota Motor Sales. So, he is a "green hand" at sales business. It is said that he often remains a listener at the conferences of managing directors. He has an established reputation as a "good listener."

The most drastic change, which the internal organization of the company underwent with Toyoda's assumption of the presidency, was the abolition of the vehicle headquarters and the export headquarters. When Teizo Yamamoto (now consultant, 69) was president, the then Vice President Shinji Araki (now consultant, 70) and Otake headed concurrently the export headquarters and the vehicle headquarters, respectively. The information concerning exports and internal sales was absorbed by these two vice presidents in the end.

Today, Otake is in charge of internal sales, and Kanda is responsible for exports, in general. These two vice presidents are free to express their opinions as assistants to the president. With the exception of Managing Director Minowa who is in charge of the administrative department including personnel and general affairs, all executives in the post of executive director and below are leading first-line sales activities directly.

The export department is divided into sections according to markets, such as North America and Europe, and the internal sales department consists of five sections which are in charge of the five different sales channels, respectively. The executive directors and the directors are equally in charge of these sections. At present, however, Executive Director Mikio Hayashi (58) is preoccupied with the task of reconstructing Sapporo Toyopet, which went bankrupt due to the well-known case of speculation in stocks. So, it is rumored that Executive Directors Tsutomu Oshima (57) and Hideo Kamio (61), who are in charge of the affairs concerning vehicles and exports, respectively, and are in a position to supervise internal sales and exports as a whole, are likely candidates for the "next" presidency or the presidency "after next."

However, a problem lies in age. All the executives in the post of executive director and above are older than the president. The late Shotaro Kamiya, who was the first president, reigned over the company for a quarter of a century. As a result, the average age of the executives has risen, and the age composition of the company's personnel has become distorted. Not a few executives will become too old to be suited for the presidency, if President Toyoda serves two terms, to remain in his post for 4 years from now.

President Toyoda is the direct-line grandson of Sakichi Toyoda who was a renowned inventor, and the eldest son of the late Kiichiro Toyoda, founder of Toyota Motors. Among members of the Toyoda family, it is hoped that "he will become president of Toyota Motors some time in the future." Chairman Kato says that "it depends solely on his ability." The "post-Toyoda" situation will change delicately, depending on the course of action to be taken by President Toyoda hereafter.

Another factor, which makes it difficult to foresee the future personnel shift, is the "rumor about the merger between Toyota Motors and Toyota Motor Sales." Not a few people think that Chairman Kato, who pulled Toyoda out of Toyota Motors for the purpose of unifying Toyota Motors and Toyota Motor Sales together, aims at eventual merger of the two companies.

Both Kato and President Eiji Toyoda (68) of Toyota Motors say that "It will be better for the two companies to merge together, if the separation of sales business from production loses its merits and begins to show demerits conspicuously." Toyota Motor Sales was separated from Toyota Motors according to suggestions from a group of creditor banks in 1950, to overcome the financial difficulty of Toyota Motors at that time. Toyota Motors has now established itself as a company in a superlative financial position, eliminating all its debts. The separation of sales business is no longer necessary for the procurement of funds.

Allergy to Merger

However, there is a strong sense of resistance against the merger of the two companies, especially among the young members of Toyota Motor Sales. Also, some people fear that the marketing functions of Toyota Motor Sales, which functions have been built since the days of the first president Kamiya and are now most powerful in Japanese automobile industry circles, may be reduced, if the merger is carried out.

To strengthen the ties between the two companies, the exchange of executives and officials of the section chief class, too, has been carried out. Will the two companies go as far as to merge together? Chairman Kato has made such a statement of delicate implications as follows: "At present, the demerits of the separation of sales business are not particularly conspicuous. It may be said, however, that it is a demerit of the separation that Toyota Motors has become somewhat indifferent toward the fact that Toyota Motor Sales has been serving as a bulwark against the storms within and outside the company."

Conditions for Being President

President Shoichiro Toyoda says as follows: "I am not in a position to say something about the conditions for being a president, because I am a newcomer as president. I can only cite such conditions as good health, which conditions have been mentioned generally.

"Upon taking the post of president, however, I felt strongly that my responsibility has increased further, because every statement I made has naturally come to be attached with greater importance than before. Whatever statement the president made is apt to be regarded as a final decision. I keep in mind that I must be careful at all times."

Toyota Motor Sales

Number of Executives: 26 (including 3 auditors).

Average age of Executives: 58.6 years; the oldest is 74 years old, and the youngest is 51 years old.

Educational Backgrounds of Executives: 6 are graduates of Tokyo University; 4--Nagoya University; 2 each--Kyoto and Rikkyo Universities; and 12--other schools.

Terms of Office Held by President: Shotaro Kamiya--25 years and 8 months; Seishi Kato--3 years and 7 months; Teizo Yamamoto--2 years; and Shoichiro Toyoda--from June, 1981 to the present.

Remuneration for Executives: Regular payments--not revealed to the public, and bonuses--¥170 million (in the business year ending 31 March 1981).

Annual Income of President: ¥257.96 million (according to his final income tax return for 1980).

CSO: 4106/38

SCIENCE AND TECHNOLOGY

MITI TO PURCHASE ADDITIONAL 10,000 TONS OF ALUMINUM INGOTS

Tokyo NIHON KEIZAI in Japanese 30 Dec 81 p 7

[Text] MITI has firmed up its plan to make an additional purchase of about 10,000 tons of aluminum ingot for stockpiling within the 1981 fiscal year, as part of the measures to meet the surplus stockpiles in aluminum industry circles. The precise quantity for purchase and the date of purchase will be determined shortly after the turn of the year. This step will help the aluminum-refining enterprises financially, because it is to be taken in their most trying period which will last until April next year, when tariff measures will be taken for their relief.

The purchase of aluminum ingot for stockpiling is carried out by the Light Metal Stockpiling Association (Chairman: Ichiro Nakayama) under MITI's guidance. The stockpiles of aluminum ingot began to increase rapidly in the summer of 1980, and this association purchased 21,990 tons of ingot in total from aluminum-refining enterprises in the February-March period of 1981. For the purchase in fiscal 1981, a budgetary appropriation of ¥4 billion was made. Later, however, it became necessary to review the policy for structural improvement, from the medium- and long-range points of view, instead of only coping with the increasing stockpiles. This led to a delay in the preparations for the purchase on the administrative level. Recently, however, medium- and long-term measures, including a revision of tariffs, have been decided upon. So, MITI has decided to carry out the purchase of stockpiling.

At the present price of aluminum ingot, about 10,000 tons of ingot can be purchased with this budgetary appropriation. The stockpiles of aluminum ingot in aluminum industry circles amounted to 329,000 tons as of the end of September, and decreased in October and in November due to the curtailment of production. As of the end of November, however, it still remained at the level of 316,000 tons, reflecting an extreme state of oversupply. Under the present situation, it cannot be expected that the reduction of stockpiles will make rapid progress. It is thought that the stockpiles will decrease by about 10,000 tons a month, at best.

CSO: 4106/38

SCIENCE AND TECHNOLOGY

MITI TO BEGIN EFFORTS FOR REORGANIZATION OF ALUMINUM INDUSTRY

Tokyo YOMIURI SHIMBUN in Japanese 30 Dec 81 p 9

[Text] MITI on the 29th consolidated its plan to exercise guidance in a positive way over aluminum industry circles, where structural depression is reaching serious proportions, to help them take drastic measures, such as vertical or horizontal merger of enterprises within the respective groups of enterprises and amalgamation and abolition of companies, for their survival. Especially, it thinks that the problem of merger of three Sumitomo firms (Sumitomo Aluminum Refining, Sumikei Aluminum and Sumitomo Light Metal Industries), which problem has now entered a final stage, will serve as a test case for the reorganization of aluminum industry circles. So, it will start positive efforts for the coordination of views, to bring this problem to a settlement directly after the turn of the year. The aluminum-refining enterprises at home have been involved in a structural depression due to the stagnation of demand at home and the increasing inflow of low-priced aluminum ingots from abroad. In spite of the voluntary reduction of production by six companies concerned, the rate of operation fell below the level of 50 percent in November.

Such a production level, which is equal to 610,000 tons on an annual basis, is dangerously low, because it is even below the level of 700,000 tons, which level was proposed by the Industrial Structure Deliberation Council in October this year as a "condition for the survival of the home industry." Moreover, the recovery of the market cannot be expected even after the turn of the year. So, it is likely to become unavoidable for enterprises to merge together or carry out amalgamation or abolition in order to meet the drastic decline in production.

Because of such a situation and because a series of measures for aluminum industry circles, such as the compilation of a report by the Industrial Structure Deliberation Council and revision of the tariff on aluminum imports, has already been taken, MITI has firmed up its plan to start full-scale efforts for the reorganization and structural improvement of aluminum industry circles. Especially, it has decided that the problem of merger of three Sumitomo firms in accordance with the proposal for horizontal or vertical merger of enterprises within the respective groups of enterprises, on which problem the negotiations among the three firms concerned have entered the final stage under the leadership of the Sumitomo Bank, has decisive bearing on the reconstruction of not only the aluminum industry but also the other structurally-depressed industries, such as the petrochemical and paper and pulp industries. So, it intends to offer powerful backing to the efforts for the early materialization of the merger of the three companies.

The negotiations among the three Sumitomo firms have already entered the final stage, but the following problems remain to be settled: (1) Aluminum refining at home is not likely to be put on a paying basis, even in the future; and (2) the three companies must decrease their respective burdens, if they want to secure the merits of merger. However, a leader of the Sumitomo Bank, which is playing a leading role in this case of merger, has stated categorically that "Merger is the only way of survival," clarifying a determined policy of carrying out the merger as early as possible under the leadership of banks. It is certain, therefore, that the problem of merger will make a sudden advance toward settlement with the turn of the year, if MITI exercises positive guidance.

CSO: 4106/38

SCIENCE AND TECHNOLOGY

JAPAN-U.S. ATOMIC STUDY TO BEGIN IN APRIL

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 17

[Text]

The projected joint Japanese-U.S. nuclear research will include reprocessing of a fast breeder reactor's spent fuel and will start, perhaps, in April. Experts of both the Power Reactor and Nuclear Fuel Development Corp. (PNC) and U.S. Department of Energy (DOE) have already shuttled between the two capitals in an attempt to start the new research project.

In 1968, PNC and the Atomic Energy Commission (which has been transformed into DOE) signed a bilateral FBR cooperative pact, including cooperation in fuel fields (fabrication, spent fuel reprocessing, disposal of wastes).

But former president Jimmy Carter chose to freeze the U.S. FBR development efforts, forcing PNC to stand idle without doing any joint studies.

The situation has changed, with President Ronald Reagan opting for resuming FBR research and development projects. In Japan, PNC recently completed what it calls a chemical processing facility at its Tokai Village works, which is intended for research on high-level radioactive materials. The Japanese Government's nuclear arm is slated to utilize CPF in March for experimental reprocessing of FBR spent fuel.

Possible themes considered by PNC and DOE experts include criticality tests, indispensable for reprocessing plant's design, with U.S. facilities. PNC hopes that it can dispatch its engineers to join the bilateral tests.

In addition, it is likely that the two organizations will include remote control technique to handle reprocessing operation. Presence of high-level radioactive materials requires development of remote control technology.

Also considered is equipmeht development, such as large-scale tanks for mixing and dissolving and material extraction columns.

The spent fuel from FBR is considerably different in nature from the conventional spent fuel generated by lightwater reactors. That prompts FBR engineers to consider technical work for process development, including chemical know-how.

The two parties started their preliminary attempts at making good the 1968 pact in the fall of 1981. Specific research themes will be discussed in forthcoming meetings so that joint research can start in April.

CSO: 4120/124

SCIENCE AND TECHNOLOGY

JAPAN, U.S. STEEL FIRMS MOVE TO BOOST COMPLEMENTARY PRODUCT TIES

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 6

[Text]

A new form of industrial cooperation appears due to materialize between the U.S. and Japan.

Kaiser Steel Corp., the ninth largest American steelmaker, has asked Japan to supply it with steel slabs (semi-finished steel for making flat-rolled steels), and five major Japanese steelmakers have accepted the request.

U.S. Steel Corp. also has asked Japanese steelmakers to supply it with steel shapes, wire rods and other rolled steel products on an original equipment manufacturer (OEM) basis.

Mitsubishi International Corp. is acting as a go-between on this prospective deal.

U.S. Steel's supply capacities for these products have become short partly because it has shut down some of its works. It intends to sell Japanese steel goods throughout the U.S., mainly in the West Coast regiona.

Last November, financially-ailing Kaiser Steel gave up being an integrated iron-steel producer by stopping the upstream (pig iron making to semi-finished steel making) operations and specializing in rolling and subsequent process operations in an attempt to shore up its business by concentrating on production of high value added steel products.

The U.S. Department of Commerce is said to have welcomed this U.S.-Japanese division of labor arrangement and have shown readiness to exclude slab supply to Kaiser from Japan's steel exports to the U.S.

As other major American steelmakers, such as U.S. Steel Corp. and Bethlehem Steel Corp., also have sounded out Japanese steelmakers on their slab purchase, the complementary division of labor is likely to gain momentum between the U.S. and Japanese steel industries.

The five major Japanese steelmakers which have accepted Kaiser's request are Nippon Steel Corp., Nippon Kokan K.K., Kawasaki Steel Corp., Sumitomo Metal Industries, Ltd. and Kobe Steel, Ltd.

Nippon Kokan, a technical partner with Kaiser, is acting as a go-between in negotiations with Kaiser.

Kaiser reportedly hopes to purchase 500,000 tons of steel slabs from Japan during 1982 and increase the purchase volume to 2.5 million tons in 1985.

Kaiser prefers Japanese steel slabs because Japanese steel slabs are excellent in both quality and product yield as they are continuously cast and also because their deliveries are exact.

Steel slab supply to Kaiser is expected to benefit the Japanese steelmakers as it will raise their operating rate which now stands at 70 per cent of capacity.

Kaiser is the only integrated iron-steel producer in the West Coast of the U.S. with a yearly crude steel capacity of 3 million tons. It is now in financial straits as its products have lost international competitiveness due mainly to superannuation of blast furnaces and coke ovens at its main Fontana works.

Its survival plan, announced last November, calls for scrapping its blast furnace sector within several years, gradually squeezing the pig iron and steel production sectors and concentrating its investment on the rolling and subsequent process equipment.

Kaiser and other major U.S. steelmakers recently have regained zeal for plant and equipment investment but their investment is earmarked mostly for continuous casting and seamless pipe making facilities. Their investments in the iron-steel making sector are still inactive because construction of this sector's facilities usually takes five years or more.

CSO: 4120/124

SCIENCE AND TECHNOLOGY

EPDC, TVA OF U.S. AGREE ON TECHNICAL EXCHANGES

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 6

[Text]

Electric Power Development Co. and Tennessee Valley Authority will sign a technical cooperative agreement in February.

The two government-controlled organizations will initially swap technical know-how on coal-fired power plants, including generation and transmission. Eventually, they may expand mutual cooperation to include hydroelectric and high-voltage electricity transmission.

TVA is interested in obtaining EPDC's coal know-how, such as fluidized-bed coal combustion, flue gas treatment and coal ash utilization. EPDC, on its part, wants to induct technical know-how on construction and running large-scaled coal-fired power plants.

The fluidized-bed coal combustion developed by EPDC features curbed output of nitrogen oxides and compact coal boilers. Air is blown from a boiler bottom into the bed with limestone as pulverized coal is fed also to the bed. TVA is constructing a similar experimental plant, while EPDC started up its test plant at its Wakamatsu station in July, 1981.

Besides, EPDC's flue gas treatment technology is said to be more advanced than TVA's because of the more stringent anti-pollution regulations in Japan. The Tokyo company is trying to develop know-how for fertilizer production from coal ashes — something that interested TVA. The U.S. organization produces power as well as fertilizers.

TVA, however, is more advanced in large plant know-how, already developing and running 1.3 million kilowatt class plants fired by coal. EPDC is trying to construct a 1 million kilowatt class plant after starting up two 500,000 kilowatt generators — the largest of its kind in Japan — at the Matsushima works early in 1981.

Both EPDC and TVA started their power business by hydroelectric plants. They are expected to probe possibilities of mutual assistance in this area, too. Further cooperation was likely to involve high-voltage direct-currency transmission, fuel battery and solar energy.

Like TVA, EPDC generates power primarily for wholesale without directly servicing end users.

CSO: 4120/124

SCIENCE AND TECHNOLOGY

FIVE POWER UTILITIES TO HELP MHI DEVELOP APWR TYPE REACTOR

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 5

[Text]

Kansai Electric Power Co. and four other utilities have agreed with Mitsubishi Heavy Industries, Ltd., (MHI) to financially help the reactor maker's advanced pressurized water reactor (APWR) project. MHI and its PWR partners intend to complete APWR design by 1984 so that they can start construction of commercial APWRs in 1987.

The project will cost an estimated ¥33 billion. Of the total, ¥10 billion each will be put up by MHI and the five electric utilities — Kansai, Shikoku, Kyushu and Hokkaido Electric Companies as well as Japan Atomic Power Co. — and ¥8 billion by Westinghouse Electric Corp. The remaining ¥5 billion is expected to be subsidized by the Ministry of International Trade & Industry.

The utilities, led by Kansai Electric Power, are discussing how they should share their cost totaling ¥10 billion.

In additon, the Bechtel Group and Mitsubishi Electric Corp. and others in the Mitsubishi group, also pledged to join the project to improve the pressurized water reactors. Some construction companies, which undertake civil engineering work at reactor sites, will participate by the end of this year.

The project is aimed at improving reactor reliability and fuel economy. The latter will be made possible by burning plutonium, as generated in a reactor. The goal is to reduce enriched uranium consumption by 25 per cent.

In the fall of 1981, Tokyo Electric Power Co., other utilities and two boiling water reactor makers — Hitachi Ltd. and Toshiba Corp. — started joint efforts for advanced BWRs.

CSO: 4120/131

SCIENCE AND TECHNOLOGY

NTT'S DATA DIVISION MAY BE MADE PRIVATE COMPANY

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 pp 1, 4

[Article by Ichiro Kifune]

[Text]

Nippon Telegraph & Telephone Public Corp. (NTT), which is Japan's domestic telecommunications services monopoly, is contemplating separating its data communications division as an entirely private, self-sustaining enterprise. This was disclosed last Thursday for the first time by its president, Hisashi Shinto. He declared at a press conference, "Separation seems to be the best way for utilizing NTT's technologies for furthering data communications."

The Second Ad Hoc Commission on Administrative Reform now is studying the possibility of changing NTT to a semi-governmental "special corporation" similar to Japan Air Lines Co. and Kokusai Desnshin Denwa Co., which monopolizes Japan's overseas telecommunications services.

Signs thus are that the problem of altering NTT's data communications division to a private basis, together with the issue of modifying the present managerial structure of the corporation itself, is going to have major repercussions on private industrial fields in the future.

However, even in the event the data communications division is severed from NTT, the separate firm's operation will be limited to a data communications facilities service competitive with the private data communications industry, such as the science & technology computation service (DEMOS-E) and the sales inventory service (DRESS) which NTT has created by using its communications circuits and is offering to general enterprises.

NTT intends to retain for itself the service of offering its circuits to private parties and also the simultaneous telephone, facsimile and data communications system, dubbed INS, which it is now developing for inauguration in the 21st century.

Data communications are one of the principal services offered by NTT's data communications division along with telephone, telegraph and leased circuits. The corporation's data communications service in fiscal 1980 recorded a deficit of ¥10.9 billion, and its facilities service in particular ran up a red of ¥43.9 billion.

Up to now there have been voices that NTT's data communications division should be placed on a self-paying basis for the following reasons:

—The corporation's data communications services have greater advantages than private enterprises in that NTT itself holds the circuits and the corporation does not have to pay the corporate tax.

—The data communication services constitute a burden to NTT's finances, and this should not be covered with revenue derived from its telephone and other profitable fields.

—It is preferable to have the data communications division compete on the same basis with private enterprises in order to enhance its technologies to boost productivity.

The Government's Administrative Management Agency recommended strongly in July, last year that the data communications division should be made financially self-sustaining and streamlined.

Amid such circumstances, opinion also increased within the Government in favor of having NTT becoming a private enterprise, and the commission studying adminis-

trative reform said then in its first report that it was going to study the issue from such a viewpoint.

NTT itself worked out three possible plans to change its managerial structure. They were:

—It should be converted to a special corporation like JAL and KDD, set up jointly with government and private funds.

—Or NTT should be made a completely privately managed joint stock company like American Telephone & Telegraph Co.

—Or NTT should keep its managerial form of being a government corporation but, legally, should be freed from budgetary restraint and be less bound by necessity to secure approval constantly for new projects.

The corporation shortly is going to submit the three plans to the administrative reform commission for study.

NTT thus hopes to have its data communications division cut off and set up as a private, self-paying enterprise. For swiftly erasing the deficit of its data communications division, NTT is intending to do away with five centers of its sales inventory service and slash its personnel by about 1,000 persons.

However, it is generally felt that in order to set up the data section as an entirely private company, NTT inevitably will have to undertake a radical review of its present managerial structure.

CSO: 4120/131

SCIENCE AND TECHNOLOGY

GENE RECOMBINATION TEST GUIDELINE TO BE ALTERED

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 pp 1, 4

[Text]

Two official standards to ensure the safety of gene recombination experiments in the country in force since 1979 are expected to be radically relaxed to about the same level as their equivalents of the U.S. and other advanced Western countries by May.

They are an experiment guideline made public by the Ministry of Education in March 1979, and an almost identical, guideline established by the Prime Minister in August of the same year.

Respectively applied to universities and other academic research facilities under the Education Ministry's jurisdiction, and all national, public and private research facilities under the Science and Technology Agency's jurisdiction, the two standards are so closely related with each other that any big revision of either is certain to lead to a corresponding change of the other.

With the Education Ministry's guideline, the Recombinant DNA (deoxyribonucleic acid) Experiment Guideline Examination Subcommittee of the Ministry's Science Council last week came up with an interim recommendation calling for such radical relaxation of the Ministry's guideline.

According to the Ministry, the interim recommendation will be procedurally replaced shortly with the final one, and the council will process it into its own ultimate revision plan for the guideline after consulting all schools and academic institutions with general engineering researches. But the Ministry already visualizes acceptance of the plan and hopes to proclaim its relaxed guideline by the second week of May.

According to sources close to the Science & Technology Agency, the Science and Technology Council of the Prime Minister's Office will quickly review the Prime Minister's guideline to match the Education Ministry's relaxation, and the Prime Minister's guideline's similar easing could be made public almost simultaneously.

The Education Ministry says the interim recommendation was to the effect that the Ministry's original guideline based on its Science Council's initial apprehension about maximum possibilities of artifical creation of unknown species of living things, especially new dangerous disease causing microorganisms, if not the science-fiction-style chimera or monsters, has been unnecessarily strict in the light of all sorts of gene recombination researches realized both in Japan and abroad since 1979. Such apprehensions have come to be considered too exaggerated or imaginary.

The equivalent situation in America is quite different because there are not only a similar experiment guideline but another closely related safety guideline concerning the handling of disease-causing microorganisms, and thus, there is even a rising call in the U.S. for abolition of at least the experiment guideline. But Japan has no disease-causing microorganism handling guideline, which poses a certain problem with the prospective relaxation. The interim recommendation has offered an answer by suggesting some new mandatory rule that such dangerous microorganisms, if to be used for gene recombination tests, should be pent up by adopting the National Institute of Health's internal study control standard concerned.

Anyway, the existing rigid standard requiring very closely sealed study facilities, known as the P (Physical) 4 and P3 class, even in combining human genes with coliform bacillus genes, will be eased

respectively to the P3 and P2 class, almost the same as the conventional microorganism experiment laboratories. Observers 'looked forward to the relaxation's effects of having a new impetus on Japan's entire gene recombination researches, especially industrial attempts to make the most of gene recombination technology.

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SCIENCE AND TECHNOLOGY

INDONESIA BROWN COAL MAY BE UTILIZED FOR METHANOL

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 6

[Text]

The Ministry of International Trade & Industry will undertake a methanol feasibility study jointly with Indonesia in fiscal 1982. The Jakarta Government already has agreed in principle that the two countries will jointly utilize brown coal in southern Sumatra for methanol production, with a part of the gasified coal likely to be consumed for fertilizer production.

The basic agreement was relayed to MITI via a fact-finding mission organized by the Institute of Energy Economics, Sumitomo Metal Industries, Ltd. (which has the gasification technology) and Mitsubishi Corp.

Southern Sumatra has brown coal deposits totaling an estimated 15 billion tons, including 435 million tons in the Bangko area alone, as earlier found by the Royal Dutch Shell Group. The coal resources, however, have not been developed until now because of the high (about 35 per cent) moisture content. Such a "wet" coal is generally expensive to carry.

The Japanese team proposed use of Sumitomo Metal's gasification technique featuring blowing pulverized coal and oxygen into molten iron. The steelmaker plans to develop a gasification plant based on the technique with daily capacity of 1,500 tons. The gas can be converted into methanol by existing, proven technology like the process of Lurgi, West Germany.

Several ideas were submitted to Indonesia by the Japanese team, including consumption of part of the gas for ammonia production. At Palembang, Indonesia runs a fertilizer complex, where ammonia and urea are produced. Another idea centered on gas utilization for power generation.

The team estimated that brown coal totaling 5,830,000 tons a year can be consumed for methanol production to the tune of 1.6 million tons and ammonia for daily output of 840 tons as well as running a 500,000 kilowatt power plant.

On its part, the Indonesian Government expects that the new industrialization program will contribute to dispersing its population from Jawa (with 70 per cent of its total population).

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SCIENCE AND TECHNOLOGY

HITACHI, GENERAL MOTORS TO DEVELOP CAR ELECTRONIC CONTROL SYSTEM

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 7

[Text]

Hitachi Ltd. of Tokyo, one of Japan's top-rated electric and electronic equipment and computer makers, will shortly start full-scale cooperation with General Motors Corp. of the U.S. in jointly developing microcomputer-involving electronic control systems for GM's small, fuel-efficient passenger car series to be produced in future, it was recently learned.

According to sources close to Hitachi, a blanket contract for such a technological tie-up on an equal, reciprocal basis will be concluded shortly between Hitachi and GM's Delco Division in charge of electrical equipment for all GM vehicles.

The tie-up will be naturally quite different from Hitachi's past export supplies of automobile electronic parts to GM because Hitachi will be chiefly in charge of the future microcomputer-built-in electronic control systems of all GM cars.

It will be all the more significant as Hitachi has recently launched a joint "microcomputer-equipped car" research and development venture with Isuzu Motors Ltd. and Suzuki Motor Co., both middle-rated Japanese automobile companies financially affiliated with GM as members of GM's global family of automakers.

Hitachi would thus be one of the direct participants as GM's new ally in the latter's drive toward its victory in the current "small car war" among all the world's automobile industries, including Japan's leading automakers.

As reported, the prospective Hitachi-GM tie-up will be so extensive it will encompass not only all types of engine control jobs based upon driving circumstances, but also all other electronically controlled automated car functions.

Domestically, Hitachi has long been closely cooperating with Nissan Motor Co. in electronic automation of the latter's cars. Last June, Hitachi also supplied Isuzu with its microcomputerized engine control system for the latter's Piazza series of small cars, the first of Isuzu's electronically-engine controlled vehicles. Isuzu is said to have learned some of the GM technology involved through ordering this system from Hitachi.

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SCIENCE AND TECHNOLOGY

RACE BEGINS TO DEVELOP SERVO VALVE FOR ROBOT

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 8

[Text] Japan's major industrial hydraulic machinery and robot makers have started a new technological race to develop robot-operating hydraulic servo valves.

At least three such companies--Kayaba Industry Co., Kawasaki Heavy Industries, Ltd. and Tokyo Keiki Co.--are engaged in the race with such intensity as to attract wide attention of U.S. and European hydraulic machine makers and technological mentors of Japan's hydraulic machine industry. Until recently, there had been only imported valves of the kind on the Japanese market.

Kayaba has recently come up with its own MK-II servo valve of electronic-hydraulic type, on which it had started a research and development project at the end of last year jointly with a machinery and equipment technological research group of Mitsubishi Heavy Industries, Ltd.

The new servo valve, with a built-in high-output motor working its control revolution axis, is said to have few troubles due to clogging by dusts contained in its hydraulic oil and at least twice as responsive to electric signals as the imports.

Its development had been chanced by the need for a specially precise valve to build into steel rolling plant labor saving and various experimental machinery.

Japan's top robot maker, Kawasaki Heavy Industry (KHI), has developed its own KS Valve to apply to the robots it has been producing under a technological license granted by Unimation Inc. of the U.S.

The KS Valve is said to have brought an inquiry from Unimation itself for its good performances. KHI plans to apply the valve to all of its future robot productions.

Tokyo Keiki has emerged with its own Digital Valve, an improved version of the conventional robot electronic-hydraulic mechanism with the latter's analog converter replaced with a pulse-code driving circuitry to make a built-in microcomputer directly control the hydraulic circuits through digital signals. Commercialization of the price of imported equivalents is planned, starting early next year.

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SCIENCE AND TECHNOLOGY

TOSHIBA FREEZES ORIGINAL PLAN TO MASS PRODUCE 64K RAM CHIPS

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 9

[Text]

Amid the intensifying competition among Japanese semiconductor manufacturers to boost their production capacity of very large-scale integrated circuits (VLSIs), Toshiba Corp., currently the third largest producer here, has frozen its plan to mass produce 64-kilobit random access memory (RAM) chips. Instead of increasing its capacity of 64K RAMs from its current monthly output of 100,000-minus units to 300,000 units in next March as it has earlier planned, Toshiba will procure a certain percentage of the chips to be used in its small computer lines from Nippon Electric Co., the top maker.

Upon settlement of detailed discussions now underway between Toshiba and NEC, the latter will probably start supplying Toshiba 64K RAMs beginning next month at the earliest, initially by around 30,000 units on a spot basis.

Toshiba's planned procurement of 64K RAM chips reflects a considerable change in its medium-range strategy toward the semiconductor business, and could affect future market share among the manufacturers, both on a worldwide scale, industrial sources here believe.

Mass production of 64K RAMs, the first-generation product of VLSIs, began only last year. Success in this field is believed to be indispensable for manufacturers to survive in the future and as a step up to the second generation, 256-kilobit RAMs. Hitachi, Ltd. announced last December it would begin mass production as early as next autumn of 256K RAMs, which have a four times larger memory capacity than the 64K.

In a bid to secure as large a share as possible of the market and to benefit from large scale production, Japanese manufacturers have started increasing their production capacity one after another. By the end of next March, NEC expects to be turning out 1.05 million chips monthly, while Hitachi and Mitsubishi Electric Corp. anticipate monthly production of 1 million and 500,000 chips, respectively. A year ago, the production rate of each of these companies was only several tens of thousands a month.

It is believed that Toshiba's failure in startup marketing competition of 64K RAMs is behind the decision to freeze its plan calling for increased capital spending. Toshiba and NEC have a joint computer sales/software development business under Ministry of International Trade & Industry guidance.

"This does not mean we are withdrawing from the VLSI field. We are developing more competitive, special types of 64K RAMs and other VLSIs, which we could start marketing this autumn," a top executive of Toshiba said.

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SCIENCE AND TECHNOLOGY

NAGAOKA UNIVERSITY SUCCESSFUL IN ION BEAM THERMONUCLEAR FUSIONS

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 988, 12 Jan 82 p 17

[Text]

The Technological University of Nagaoka, Niigata Prefecture, recently reported a series of remarkable successes in creating high-speed and high-energy beams of ions of hydrogen, boron and carbon for causing thermonuclear fusions.

The university's Etigo-I experimental facility to create such ion beams, Japan's first full-fledged device of the kind completed at the end of 1980, is intended for starting a nuclear fusion reaction phenomenon in a small test spherical reactor less than 1 millimeter in diameter packed with deuterium and tritium, multi-molecular types of hydrogen as "fuel," by bombarding the two items in the reactor with strong ion beams.

The nuclear fusion type of energy creation, one of the two ideal sun-like energy generation sought by all the world's nuclear energy researchers, roughly divide into two kinds. One of them is to pen up such fuels in a strong magnetic field as an extremely hot and dense plasma (electronically separated condition as to their molecules and atoms).

The other is a more recently developed way, an inertial pen-up type, to put such "fuels" in a small spherical reactor and make the fuels explode by some powerful energy bombardment, and cause the wanted very hot plasma condition by utilizing the force of compression occurring in reaction to the force of explosion.

The new way is best developed in the U.S., where an actual nuclear fusion trial by that way is said scheduled by 1985.

According to the university, its Etigo-I facility, built according to the new inertial pen-up principle, is a cylindrical affair lying on one side and measuring 11 meters long, 3.5 meters high, and its ion beam generator inside is also a cylinder of 5 meters in length and 2.5 meters in diameter.

A pair of concave mirror-style ion generating source of 12 centimeters in diameter in the heart of the double cylinder emits ion beams through filming of some kind of fuel when a strong electric pressure is applied to it. During the past one-year period, the university's research team has carried out as many as 8,000 tests to create ion beams. The team thus has succeeded in creating such beams of at least 50 nano-seconds in beam pulse width and in 1 million electron volts fuel acceleration electric pressure (speed), using not only hydrogen, but also boron and carbon.

In the necessary narrowing down of the beam, increasing of its current density and ensurance of effective transmission of the beam to the target, the team has succeeded in reducing the beam's diameter from 12 centimeters to 8 millimeters, raising the beam's electric density from 50 amperes/square centimeter to 10 kilo-amperes/square centimeter, about 200 times higher, attaining about 80 per cent in the beam transmittability.

The team is continuing to refine its achievements toward a target of 10 million electron volts in electric pressure for the earliest possible start of Japan's own nuclear fusion trials.

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SCIENCE AND TECHNOLOGY

FUJITSU FANUC COOPERATES WITH TATUNG ON ROBOT MARKETING

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 8

[Text]

Fujitsu Fanuc Ltd. has reached basic agreement with Taiwan's Tatung Engineering Co. to tie up on sales of industrial robots.

Under the arrangement, the Taiwanese company will be granted the exclusive right to sell all kinds of Fujitsu Fanuc's robots in Taiwan over the next seven years. The top-rate Japanese robot developer now manufactures handling robots for machine tools equipped with numerical control device, assembly robots for machinery parts, and other high efficiency robots.

Fujitsu Fanuc President Seiemon Inaba will fly to Taipei soon to formalize the basic accord. Inaba said the sales tie-up may develop into a broader link, including production skills, if Tatung wishes to do so.

The Taiwanese enterprise, based in Taipei, is a conglomerate engaged in a variety of business lines, including electronics, computers, communications equipment, heavy electrical machinery, and iron and steel. The company recently puts a stress on machine tools and other machinery sectors. It also shows a strong zeal to branch out into the robot field. .

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SCIENCE AND TECHNOLOGY

YAMAHA TO ENTER INTO AIRCRAFT ENGINE FIELD

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 8

[Text]

Yamaha Motor Co., one of Japan's largest motorcycle makers, is venturing into the aircraft engine industry this year as its new business diversification step.

It already had obtained the permission of the Ministry of International Trade & Industry for doing so under the Aircraft Production Enterprises Law.

Sources close to the company said that in fiscal 1982, starting next April, Yamaha will produce and deliver to the Defense Agency several piston engines for drones, that is, unmanned target planes, for the "Short SAM" (short-range ground-to-air missiles) of the Ground Self-Defense Force. The company is planning to build its position in the industry, starting with such target plane engine production.

Though long fiercely competing with Honda Motor Co., the world's largest motorcycle maker of Japan, both on the domestic and overseas motorcycle markets, Yamaha Motor has been aspiring for such a business diversification, because of its disadvantage of being a motorcycle and engine-making specialist, compared with Honda's successful motorcycle and automobile business lines.

The company of Iwata, Shizuoka Pref. will be the fourth Japanese air engine producer under the law after Ishikawajima-Harima Heavy Industries Co., Kawasaki Heavy Industries, Ltd. and Mitsubishi Heavy Industries, Ltd.

But the sources said MITI plans to guide Yamaha Motor's development as an air engine maker in such a way as to make a special kind of air engine manufacturer apart from the established trio on the basis of Yamaha Motor's experience and skills in automotive engine production. MITI hardly thinks the company is qualified at present to participate in any international joint air engine development venture.

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SCIENCE AND TECHNOLOGY

MINISTRIES DIFFER AS HOW TO REVISE DATA COMMUNICATIONS LAWS

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 9

[Text]

The Ministry of International Trade & Industry and the Ministry of Posts & Telecommunications (MPT) are at odds over revision of laws related to data communications whose liberalization or open use has been strongly demanded by the United States and Japan's business community.

Both ministries have had eight sessions of negotiations over revision of data communications laws since mid-December, last year, but their views still are wide apart and seem difficult to be bridged in the near future. MPT demands that a new law, tentatively named "Data Communications Law," must be mapped out and enacted, while MITI argues revision of the present Public Telecommunications Law is adequate to cope with the situation

Data communications circuits in Japan have been monopolized by the governmental Nippon Telegraph & Telephone Public Corp. (NTT), but MITI and the business community have long been criticizing that such a monopoly hinders progress of data communications, and have been demanding "liberalization in principle" of joint use of leased lines by private businesses.

The arguments of both ministries hinge on the following two points: 1) Whether a new law as demanded by MPT is necessary for the liberalization of leased lines; 2) Whether protection of users of data communications circuits should be achieved by legal means as argued by the Posts & Telecommunications Ministry or be entirely left to open competition among users, as MITI concedes.

On these two points, the two ministries completely differ. MITI is all-out to admit to a maximum degree the participation of private firms in data communications except for such main businesses as telephone and telegram services handled by NTT, but MPT argues that the business of private firms in data communications field must be checked to protect users. Behind these widely-changing views lies the fact of bureaucratic "jawboning" between the two ministries in an attempt to place under their respective control the data communications industry which is expected to make gigantic progress in the coming decade.

Up until now, all reports or recommendations made by Keidanren (Federation of Economic Organizations), the Administrative Management Agency and the Fair Trade Commission have been in favor of the MITI opinion. The interim report of the Second Ad Hoc Commission on Administrative Reform also has demanded extensive liberalization of data communications circuits, following closely the MITI argument.

Furthermore, the U.S. has recently demanded a complete liberalization of data communications circuits on the grounds that the legal revision of the Posts & Telecommunications Ministry excludes the participation of foreign capital in Japan's data communications, thereby likely to become another source of economic friction between the two countries.

Spurred by all these factors MITI had recently adopted tactics of filibustering to stop the plan of the Posts & Telecommunications Ministry and has been demanding complete liberalization of data communications circuits through the revision of existing laws. Faced with this, the MPT plan has hit a stumbling block.

All bills must be submitted to the current Ordinary Diet session by mid-March for passage.

But if the current deadlock continues, it will be extremely difficult for both ministries to come to terms over the matter. Chances are likely that revised bills might just cover those areas where both ministries have found the agreement, being far from the complete liberalization of data communications circuits aimed at the beginning of negotiations. In this sense, observers said, even if both ministries have come to agreement on some areas for the time being, complete liberalization of data communications is very likely to be postponed.

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SCIENCE AND TECHNOLOGY

TORAY TO COMMERCIALIZE 'STRONGEST' FINE CERAMIC

Tokyo JAPAN ECONOMIC JOURNAL in English Vol 20, No 989, 19 Jan 82 p 17

[Text]

Toray Industries, Ltd. recently disclosed intention to commercialize the new fine ceramic it has developed and confirmed as being the strongest of its sort so far made in the world.

The leading multi-business Japanese synthetic fiber maker will start test production of its new ceramic by around June at an experimental plant to be built within its Shiga factory complex in Otsu City near Kyoto.

The company said the ¥500 million plant for producing several hundred kilograms of the fine ceramic will perform all sorts of tests to develop many different applicabilities of the ceramic and set the stage for full commercialization of the ceramic in about five years.

The company explained its new engineering ceramic is essentially a 3 per cent yttria-added and sintered version of Zirconia. (Yttria is an oxide of yttrium, while Zirconia is a kind of zirconium oxide developed by the company itself.)

Its new engineering ceramic has attained anywhere between 150 and 170 kilograms per square millimeter in bending strength, far surpassing the hitherto known world record of 130 kgs. per square millimeter for such materials, the company said.

In addition, its new product has proved to be so tenacious and free from the inherent brittleness of ceramics as to defy ordinary hammering, let alone its high resistance to heat and chemicals and high moldability.

So far, the company has used its new product as an oxygen density sensor for its oxy ion conductivity and also tried it for making knives by making the most its physical properties. But the company visualizes many more uses of the new products, including production of electronic parts and industrial cutting edges.

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